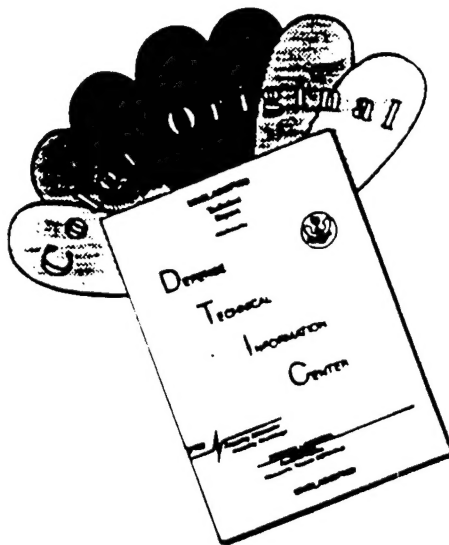


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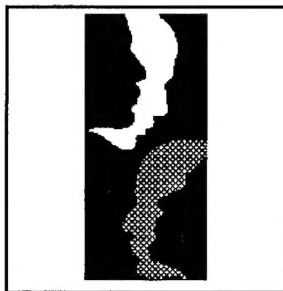
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# UNIVERSITY OF THE DISTRICT OF COLUMBIA

*A Project of Technical Assistance  
to  
Historically Black Colleges and Universities  
and  
Minority Institutions*



**"MEETING THE MINORITY CHALLENGE IN SCIENCE AND TECHNOLOGY:  
INSTITUTIONAL CAPACITY BUILDING FOR AIR FORCE RESEARCH"**

Approved for public release,  
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**FINAL REPORT**

**AFOSR Contract, F49620-94-C-0013**

**July 31, 1996**

**Supported by the Air Force Office of Scientific Research (AFOSR)  
Bolling AFB, DC**

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Joan Becker  
1st Lt

UNIVERSITY OF THE DISTRICT OF COLUMBIA

FINAL REPORT

AFOSR Contract, F49620-94-C-0013

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### ***Contract Overview***

Section 832 of the National Defense Authorization Act for Fiscal Year 1991 increased the statutory authority of the Department of Defense to provide infrastructure assistance to Historically Black Colleges and Universities and other Minority Institutions (HBCUs/MIs). Under this authority, the Air Force Office of Scientific Research (AFOSR) contracted with the University of the District of Columbia (UDC), and separately with Southern University at Baton Rouge, to provide technical assistance to HBCUs/MIs to enhance their ability to compete successfully for Air Force basic and applied research grants, contracts, and fellowships. Technical assistance was provided in structuring formal sponsored research programs, proposal development, acquainting HBCUs/MIs scientific faculties with Air Force research programs, and guidance in grant and contract management. The effort also included counseling and advising HBCUs/MIs to facilitate their adherence to related technical performance, and administrative and Federal regulatory requirements.

### ***Objectives***

- \* To enhance graduate and doctoral programs at HBCUs/MIs;
- \* To assist in the establishment of partnerships between defense laboratories and HBCUs/MIs;
- \* To enhance the awarding of fellowships, grants, and contracts to HBCUs/MIs;
- \* To enhance the ability of HBCUs/MIs to attract and retain scientific faculty members; and
- \* To provide other appropriate assistance designed to strengthen scientific disciplines at HBCUs/MIs.

### ***Scope***

- \* To develop and manage the technical assistance program;
- \* To query HBCUs/MIs to ascertain their needs for technical assistance;
- \* To identify and prioritize technical assistance requirements;
- \* To develop and disseminate informational and instructional materials to participating HBCUs/MIs; and
- \* To report program accomplishments.

## *Final Report*

The Division of Research, Training, and International Programs of the University of the District of Columbia (UDC) submits this final report for Air Force Office of Scientific Research (AFOSR) Contract, F49620-94-C-0013. The report covers February 1, 1994 through July 31, 1996.

### **Section 4.2 - HBCUs/MIs Eligibility and Technical Assistance Participants**

According to data reported by the Office of Civil Rights, United States Department of Education, 434 colleges and universities satisfy the definition for being designated Minority Institutions (MIs). Of these, 103 are further defined as Historically Black Colleges and Universities (HBCUs). One condition of this contract was to determine which of these Historically Black Colleges and Universities and other Minority Institutions (HBCUs/MIs) would be eligible for grants, contracts, and fellowships under AFOSR programs.

An institution must grant baccalaureate or higher degrees in at least one area of science, mathematics, or engineering in order for it or its faculty to be eligible for participation in this AFOSR sponsored program. Based on our findings, 132 HBCUs/MIs meet this requirement. **Appendix A** provides the names and addresses of eligible institutions, contact persons, their telephone and FAX numbers, and E mail addresses.

Another requirement of the contract was for UDC to offer/provide technical support to as many as fifteen of the eligible HBCUs/MIs. As expected, some of the institutions were already successful in their pursuit of sponsored programs and did not need the level of technical support that we offered. However, we involved some of these successful institutions by using them as models. Therefore, based on an initial screening and a follow-up survey, 42 HBCUs/MIs were identified as "participating HBCUs/MIs" in this effort. **Appendix B** lists these institutions. Included are institutions that were represented at videoconferences held at UDC on November 3, and 4, 1994; institutions with research faculty representation at the Rome Laboratory conference on October 16, 17, and 18, 1995; and those represented at the workshop for administrators held at North Carolina A&T State University on October 24, and 25, 1995. Of these, 28 institutions indicated a need for technical support, they are shown in **bold lettering** in **Appendix B**.

### **Section 4.3 - Technical Support Center**

Throughout this contract, UDC operated a Technical Support Center (TSC) that offered on-going technical assistance to eligible HBCUs/MIs. The TSC was open during normal hours of the University and was accessible through a toll-free number. It responded to questions about grant and contract opportunities, fellowships, proposal writing, and grant management. Additionally, the TSC administered surveys to HBCUs/MIs, and notified them of upcoming conferences and specific Air Force grant and contract opportunities.

Two different DoD Broad Agency Announcements were sent to over 200 researchers and sponsored program administrators at HBCUs/MIs. Their interests in sponsored programs had been identified in digests previously compiled by the National Association for Equal Education Opportunity in Higher Education and the TRACTELL corporation. In addition, one of several surveys sent to HBCUs/MIs sought to ascertain whether or not they possessed satellite downlink capability, and whether or not the institutions/researchers were interested in receiving technical assistance with respect to the preparation of a response to the Broad Agency Announcement or to other DoD solicitations.

Key to the success of this contract was the establishment of an effective advisory council. The council worked through the TSC and served to insure that the thinking and concerns of HBCUs/MIs were properly reflected in all of our technical assistance efforts. We solicited members for the council that were familiar with HBCUs/MIs and the problems and obstacles related to grant and contract opportunities that confronted them. They represented a wide range of interests and experiences concerning the research infrastructures of HBCUs/MIs. Members of the advisory council were:

Dr. Rose Glee, Director  
Office of Sponsored Programs  
Southern University - Baton Rouge

Dr. Eugene Jones, President  
TRACTELL, Inc.

Dr. Ernestine Psalmonds, Vice Chancellor for  
Research Administration  
North Carolina A&T State University

Dr. Leslie Speller, Co-Project Director  
University of the District of Columbia

Dr. Samuel Sullivan, Co-Project Director  
University of the District of Columbia

Dr. Sheadrick Tillman, Associate Vice  
President for Operations and Planning  
Meharry Medical College

Dr. Demetrius Venable, Executive Vice  
President and Provost  
Hampton University

Dr. Conrad Williams, Professor  
Department of Physics  
Morgan State University

Dr. Lois Stoval Williams, President  
Knoxville College

Meetings of the advisory council were held on November 3, 1994 in Washington, DC and on January 19, 1995 in Baton Rouge, LA. The council's report is provided in **Appendix C**. In summary, the council's recommendations were that:

- \* AFOSR program initiatives should be improved by having HBCUs/MIs participate in the development of an "Omnibus Plan" to address HBCUs/MIs program needs.
- \* Infrastructure should be as broadly construed as possible. The main thrust should be to improve the academic, administrative, and technical capabilities of HBCUs/MIs. In addition, infrastructure training should include instruction on the management of contracts and grants in sponsored programs offices.
- \* Technology enhancements to improve the flow of information on campuses should be considered a priority for AFOSR (DoD), (i.e., computer hardware and software upgrade, access to the internet, bulletin boards, distance learning, etc.).
- \* The primary goal of this program should be to increase the number of quality proposals submitted to DoD from HBCUs/MIs.
- \* AFOSR should include new initiatives in its programs that are designed to increase the number of minority scientists and scholars teaching at HBCUs/MIs. New initiatives should also focus more on increasing the number of minority graduate students at HBCUs/MIs.
- \* Air Force laboratories should be encouraged to increase their interactions and programs with HBCUs/MIs faculties and students.
- \* The Air Force Institute of Technology (AFIT) should audit graduate programs and make recommendations to enhance curricula and propose other changes, if required, and use some of its resources to improve programs at HBCUs/MIs.

In order to provided funds for the participation of additional faculty and sponsored program administrators in upcoming videoconferences and site visits, functions of the advisory council were not carried into the second contract year. This decision was reached following discussions with council members.

In keeping with other responsibilities, the TSC mailed applications for the AFOSR 1996 Summer Research Program for Faculty and Graduate Students to those on our list of researchers at HBCUs/MIs. Eight researchers informed the TSC that they had submitted applications. The results of those submissions is:

Dr. Graham R. Allan -- Accepted an award to work at Kirtland AFB  
Department of Physics  
New Mexico Highlands University

Dr. Alberto Caceres -- Not approved  
Department of Mathematics  
University of Puerto Rico - Humacao

Dr. John J.C. Hwang -- Not approved  
Department of Mathematics  
Morris Brown College

Dr. Mary Ann Jungbauer -- Not approved  
Department of Chemistry  
Barry University

Dr. Fenglien Lee -- Not approved  
Department of Computer Science  
Winston-Salem State University

Dr. Joe O. Omojola -- Not approved  
Department of Natural Sciences  
Dillard University

Dr. Mark Purtill -- Accepted an award to work at Rome Laboratory  
Department of Mathematics  
Texas A&M University, Kingsville

Dr. Raymond Williams -- Not approved  
Department of Mathematics and Computer Information Sciences  
Mississippi Valley State University

#### **Section 4.4 - Comprehensive Resource Referral and Matching Data Base System**

By working through sponsored program administrators at eligible HBCUs/MIs, we obtained resumes from research scientists who expressed an interest in participating in this technical assistance program. The call for resumes yielded a sizeable number of returns which were scrutinized for relevancy with respect to Air Force research requirements.

For some scientists at eligible HBCUs/MIs, **Appendix D** identifies their research interests that are in line with research priorities of Air Force directorates. It is expected that this listing will be useful as a desk guide to Air Force program and procurement personnel seeking to identify candidates for receipt of Broad Agency Announcements, other invitations or requests for proposals, and fellowship announcements.

Subsequent requests for information related to HBCUs/MIs research laboratories and facilities yielded no additional findings. The majority of the laboratories at participating HBCUs/MIs are dedicated to academic programs. A few have specific research laboratories. Included are:

- \* **Delaware State University** - Immunogenetics Research laboratory, Histochemistry laboratory, Biobehavioral Psychology laboratory, Biochemistry Research laboratories, Laser Physics laboratory, Cytogenetics laboratory, and others. Institution has access to Human Immunogenetics Research laboratory of the National Institutes of Health, Milton Hershey Medical Center - Pulmonary Biolaboratory, and University of Delaware Neuroscience/Neuropharmacology laboratory.
- \* **Dillard University** - Laser Physics and Spectroscopy laboratories. Institution has access to Cold Region Research and Engineering laboratory and University of Tennessee Materials laboratory.
- \* **Elizabeth City State University** - Institution has access to computer facilities in Research Triangle Park and the Southern Regional Network. New research laboratory facilities are currently under construction.
- \* **Fisk University** - Physics laboratory for materials research, including NASA Center for Photonics Research. Faculty have access to Oak Ridge National Laboratories; Meharry Medical College laboratories; Vanderbilt and Stanford universities laboratories; and Marshall and Lewis Space Flight Centers laboratories.
- \* **Langston University** - Biochemistry, Physiology, and Electron Micro research laboratories.
- \* **North Carolina Central University** - Computer Mapping Laboratory with remote sensing software.
- \* **St. Augustine's College** - Institution has access to Environmental Protection Agency laboratory, National Institutes of Health laboratory, and Army Research Center laboratory.

- \* **Texas A&M International University** - Has completed Phase I construction of four teaching laboratories and a Physics/Mathematics laboratory. Phase II construction will soon commence and will contain two research laboratories.
- \* **Texas A&M University - Kingsville** - Engineering McNeil Laboratory with Engineering Computing Center, Dotterweich Laboratory for materials science. Institution has been funded at \$1 million for intelligent controls research for the Office of Naval Research.
- \* **University of the District of Columbia** - Scientific Parallel Processing Applied Research Center, Materials Testing laboratory, Engineering Research Center (Biomechanics), Computer Information and System Management Institute, and Mortuary Science laboratory.
- \* **Virginia State University** - Laser Physics laboratory with Quantel Q-switched Nd and conducts laser-induced damage studies at semi-conductor surface. It also has specialized Chemistry and Life Sciences laboratories.
- \* **Xavier University** - Institute for Bioenvironmental Toxicology with full laboratory facilities and specialized Chemistry laboratories.

#### **Section 4.5 - Infrastructure Needs Assessment**

Following videoconferences held at UDC on November 3, and 4, 1994, and prior to conferences held at Rome Laboratory, and at North Carolina A&T State University, UDC and Southern University administered infrastructure needs assessment surveys to 165 HBCUs/MIs. Questions included whether or not the HBCU/MI had a formal sponsored research office, the name of its sponsored research administrator, and whether or not the institution required assistance in developing a research management infrastructure (including developing an office, identifying a responsible management individual, identifying staff support, developing a financial management system, etc.). Complete summaries of survey results are in **Appendices E and F**. They include the following:

- \* Does your institution have a formal sponsored research office? [24] Yes [ 6] No

**The six "No" responses were from: Barry University, Dillard University, Fort Valley State University, Johnson C. Smith University, Tougaloo College, and Texas A & M International University.**

- \* Prior to viewing these videotapes, how familiar would you say faculty at your institution were with grant, contract, and institutional capacity building programs (fellowships for faculty and students) sponsored by the **Air Force**?



[ 6] Unfamiliar    [19] Vaguely Familiar    [ 3] Very Familiar    [ 2] Participant

**Those institutions indicating that they were very familiar with Air Force grant, contract, and fellowship programs include: Fayetteville State University, Fort Valley State University, and Elizabeth City State University. In addition, Delaware State and Elizabeth City State indicated that while some of their faculty were Active Participants in Air Force programs, others were either only Vaguely Familiar (40% - Elizabeth City State; 90% - Delaware State), Very Familiar (30% - Elizabeth City State), or Active (10% - Delaware State; 30% Elizabeth City State).**

- \* One issue addressed in the videotapes is how to develop a structured research program. This includes infrastructure development, identification of grant and contract opportunities, proposal writing, and grant and contract management.

Do you feel that your institution needs additional information in one or more of these areas? [28] Yes    [ 2] No

**The two indicating that their institutions required no additional information were: Mississippi Valley State and West Virginia State.**

If yes, which of the following topics represent key areas of need for your institution?

- [10] Developing a Research Management Infrastructure (Office of Sponsored Research, Identifying a Responsible Individual for Management of the Research Function, Identifying Staff Support for Management of the Research Function, Developing a Financial Management System for Grants and Contracts, etc.)
- [19] Strengthening the Research Capacity (Identification of Capable Faculty to Perform Research, Providing State-of-the-Art Training for Faculty, Securing Expert Support for the Conduct of Research, etc.)
- [20] Identification of Grant and Contract Opportunities (Marketing of the Institution, Developing a File of Grant and Contract Opportunities, Securing Subscriptions to Grant and Contract Announcement Periodicals, Amassing Publications Regarding Grant and Contract Opportunities, etc.)
- [20] Networking Within the **Air Force** Infrastructure (Identifying Specific **Air Force** Research Needs, Maintaining On-going Working Relationships with **Air Force** Programs, etc.)



- [17] Proposal Writing (Structuring Proposals, Conceptualizing Ideas for Fundable Proposals, Editing Proposals, etc.)
- [17] Grant and Contract Management (Meeting Grant and Contract Obligations, Adhering to Legal and Regulatory Requirements, Managing Fiscal Reporting Requirements, Abiding by Cost Principles and Allowable, etc.)

#### **Section 4.6 - Videoconferences and Site Visits**

During this contract, UDC produced four conferences. Each was designed around the theme, "Meeting the Minority Challenge in Science and Technology: Institutional Capacity Building for Air Force Research." The theme calls for HBCUs/MIs to re-examine their research missions, their institutional commitments to research, as well as the research capabilities of their faculties - and then, to develop courses of action for meeting the challenge. Each conference addressed this theme by focusing on different ways of getting HBCUs/MIs more involved in DoD sponsored programs.

#### ***Parts I and II***

#### ***Live Videoconferences: Infrastructure Development and Air Force Programs Hosted by the University of the District of Columbia***

On November 3rd, in Part I, UDC presented technical information regarding the challenges confronting HBCUs/MIs in their attempts to establish effective sponsored program operations. It featured the following topics and presenters:

#### ***Program Overview***

Dr. Samuel Sullivan, Project Director  
University of the District of Columbia

Dr. Rose Glee, Project Director  
Southern University - Baton Rouge

#### ***Effective Sponsored Research Infrastructures***

Dr. Ernestine Psalmonds, Vice Chancellor for Research  
North Carolina A&T State University

*Search for Research Opportunities*

Robert Goodman, Esq.  
Consultant

*Developing a Successful Proposal*

Mr. John Rodman, President  
FEDIX, Inc.

*Government Contract Environment*

Larry Harris, Esq.  
Pettit & Martin

*Managing Sponsored Grants and Contracts*

Ms. Cynthia Belton, Technical Assistance Specialist  
University of the District of Columbia

Detailed information regarding available assistance through the UDC Technical Support Center and through the Southern University technical assistance effort were provided. There was also a call-in segment that gave downlink site participants the opportunity to ask questions of presenters. **Appendix G** is a brochure used to announce both Parts I and II.

Part II, held on November 4th, highlighted the Air Force Materiel Command (AFMC). The morning session comprised presentations by personnel from the AFOSR and from Air Force research laboratories. They introduced HBCUs/MIs representatives to Air Force research and capability enhancement support programs. The session was hosted by Brigadier General Richard R. Paul, Director for Science and Technology of the Air Force Materiel Command, and Dr. Helmut Hellwig, Director AFOSR. Presenters were:

*Program Overview*

Dr. Harold Weinstock, Program Manager  
Air Force Office of Scientific Research

*Mission and R&D Activities of Air Force Laboratories*

Dr. George C. Mohr, Chief Scientist  
Armstrong Laboratory

Colonel Dayton L. Silver, Vice Commander/Director of Operations  
Phillips Laboratory

Mr. O. Lester Smithers, Deputy Director  
Wright Laboratory

Dr. Darryl P. Greenwood, Chief Scientist  
Rome Laboratory

Colonel George K. Haritos, Deputy Director/Commander  
Air Force Office of Scientific Research

The afternoon session featured presentations by five HBCUs/MIs presidents on some of the obstacles that inhibit them from fully participating in research programs supported by the AFMC. The session also featured a panel discussion with audience questions on the topic, "Linking HBCUs/MIs with AFMC Laboratories." Mr. Anthony J. DeLuca, SAF/SB, Pentagon, was the session's moderator. Members of the panel were:

Brig. Gen. Richard R. Paul, HQ AFMC/ST  
Wright-Patterson AFB OH

Dr. Helmut Hellwig, AFOSR/CC  
Bolling AFB DC

Gen. Julius Becton, Jr. (U.S. Army, Ret)  
Prairie View A&M University

Dr. Earl S. Richardson, President  
Morgan State University

Dr. Robert C. Detweiler, President  
California State University - Dominguez Hills

Dr. Modesto A. Maidique, President  
Florida International University

Dr. Lois Stovall Williams, President  
Knoxville College

In all, eighty-three sites indicated that they had downlink capabilities and that they would downlink Parts I and II. Others indicated that they did not have this capability and requested copies of the videoconference tapes.

In addition to the actual videoconference, a formal luncheon was held on November 4th, to facilitate increased direct dialogue between officials from HBCUs/MIs and AFMC personnel. Luncheon speakers included Dr. Samuel Myers, President of the National Association for Equal Opportunity in Higher Education, and Dr. Helen Marquez, Director, Student Development Programs, the Hispanic Association of Colleges and Universities. The luncheon was successful in providing an opportunity for on-site participants, including presidents, and Air Force personnel to begin a dialogue for future involvements.

Thirty representatives from HBCUs/MIs were on-site participants in these videoconferences and activities. Additionally, twenty-seven Air Force personnel actively participated in the videoconference on November 4th.

Videoconference evaluation forms were sent to downlink site coordinators prior to the broadcasts. A summary of returned forms is provided in **Appendix E**. As with subsequent surveys of HBCUs/MIs faculty and sponsored program administrators, this one revealed that most respondents were not familiar with Air Force grant, contract and fellowship programs. Most also were of the opinion that they and their institutions needed help in developing a structured research program, developing an infrastructure, learning to network, and learning how to write an effective proposal.

### ***Part III***

#### ***Conference and Site Visit for HBCU/MI Research Scientists Hosted by Rome Laboratory***

The Rome Laboratory Conference and Tour was held at the former Griffiss AFB in Rome, NY. Forty-two faculty researchers from 24 HBCUs/MIs participated in the two and one-half day Rome event. **Appendix H** is a list of attendees. **Appendix I** is a copy of the conference program.

As the conference began, faculty researchers completed a Rome Tour Participant Survey. The survey asked generally the same questions that were being asked of sponsored program administrators. Its results are given in **Appendix J**. As shown, in advance of their visit to Rome, 32 of the researchers (82%) indicated that their faculties were either "Unfamiliar" or "Vaguely Familiar" with Air Force grant, contract, and fellowship programs. Only two were active participants in Air Force work. All responded that their institutions required additional assistance in improving their structured research programs. The most requests for assistance were for: Strengthening the Research Capacity, and Networking. These were followed by: Proposal Writing, and Identifying Grant and Contract Opportunities. The group offered a number of suggestions for added Air Force involvement in strengthening sponsored research at their respective institutions. These are also summarized in **Appendix J**.

**Appendix K** shows results of the survey administered to participants at the end of the conference. It revealed that about half of the scientists indicated had made specific contacts with Rome scientists that they intended to pursue. Also, about half indicated their intention to develop and submit "white papers." The majority found the mini-sessions to be highly useful. The level of detail allowed them ample time to become intimately familiar with the specific kinds of research sponsored by Rome Laboratory, with which the majority was not previously familiar. Ninety-six percent of the faculty researchers indicated that they are now more familiar with the AFOSR, and 65% marked that they would consider a summer research opportunity at Rome Laboratory. Seventy-two percent indicated that they feel there are realistic opportunities at Rome Laboratory in areas within their fields of interest. All rated the conference and tour as "good" or "excellent."

A survey to track the progress made by these scientists regarding their intentions following the Rome Laboratory visit revealed the following:

Question 1. *Did you make contacts with Rome scientists that you intend to follow-up?*

On the original survey there were 24 YES answers to this question. Ten responded to the follow-up survey with six of these indicating that they had made progress and that the contact was helpful.

Question 2. *Will you pursue submitting a "white paper" to at least one contact that you made?*

There were 26 YES responses on the original survey. Of these, 11 returned our follow-up survey. Eleven "white papers" were sent to Rome scientists.

Question 3. *Would you consider a summer research opportunity at Rome Laboratory?*

Of the 26 answering YES on the original survey, only 12 responded to the follow-up survey. Five indicated that they had applied.

From all indications, the trip to Rome Laboratory was a tremendous success. Several researchers thought that a similar conferences at other laboratories would be helpful.

#### ***Part IV***

#### ***Conference and Site Visit for HBCUs/MIs Sponsored Program Administrators Hosted by North Carolina A&T State University***

The A&T conference was entitled "Infrastructure Building for Effective Sponsored Program Operations." At the conference, we continued the process of providing assistance in infrastructure development. The conference design made it possible for participants to

focus on specific problems that seem to limit the development of their institution's sponsored program operation, and to discuss strategies used by others to successfully address them.

Thirty-one sponsored program administrators from 28 HBCUs/MIs attended the A&T conference. **Appendix L** is a list of attendees. Our objective during the sessions was to offer the North Carolina A&T sponsored research administration as a successful comprehensive model which could be adapted in whole or in part, depending on the resources of the particular institution. Also, our approach was to engage institutions in discussions about the kinds of structures, issues, obstacles, and strategies that characterized their sponsored research operations. The conference program is shown in **Appendix M**.

The conference emphasized experience sharing among participants. They discussed common hurdles that many HBCUs/MIs have had to overcome in order for them to build more effective sponsored programs. Such hurdles included:

- \* Limited resources
- \* Heavy teaching loads
- \* Small or no sponsored program operations
- \* Ineffective infrastructure
- \* Inefficient distribution of sponsored program information
- \* Writing effective proposals

Some suggestions brought forward as having worked, and therefore possibilities for helping others overcome these hurdles were:

- \* Utilize students and under loaded faculty
- \* Publish newsletters and bulletins
- \* Develop plan for sharing indirect cost revenue
- \* Treat the institution as a business
- \* Develop capability statement
- \* Conduct proposal writing workshops

- \* Network and collaborate with other institutions
- \* Develop research thrusts

The segment on experience sharing was followed by a pre- and post-award functions workshop, led by A&T's Vice Chancellor for Research, Dr. Earnestine Psalmonds. During her presentation she stressed the importance of the hierarchical positioning of the sponsored research function within an institution, emphasizing the need for maximum support from administration. She highlighted for the group that the sponsored program function will vary from institution to institution by dint of the individual institutional characteristics. Key determinants in defining the nature and extent of the sponsored program operation include: administrative commitment, institutional goals and objectives, institutional consensus, faculty capabilities, institutional size, relationship between academic and research programs, and track record. She viewed as a priority three principle duties for sponsored research administration: increase productivity, improve efficiency and effectiveness, and provide needed support services.

Dr. Psalmonds also stressed the need for team building within the institution and for providing continuous training and informational support to faculty researchers and departmental administrators. She noted the importance of structuring the administration of sponsored programs by key functions related to pre-award and post award phases and of guiding and supporting faculty researchers through these necessary processes. At A&T, for example, the sponsored research office has specific functional areas which handle: marketing and opportunities announcements; proposal review clearances and tracking; teaming and confidentiality agreements; and adherence to institutional policies and procedures with respect to establishment of research centers, institutes, and/or new degree programs.

With respect to post-award, the A&T research administration conducts project initiation meetings; goes over all contract/grant and regulatory requirements with all parties; conducts project close out audits; and maintains all administrative contacts with sponsoring organizations. Dr. Psalmonds' presentation underscored the institution's, as opposed to the individual's, responsibility to fulfill the requirements of grants and contracts.

The site visit, tour, and discussions proved highly useful to the group of sponsored program administrators. Of the 28 participant institutions, 22 rated the workshop "excellent," and three rated it "good." The majority of institutional representatives identified "Overview of the Organizational Structure" as the most useful topic. Issues related to support from lead administration, incentives for faculty involvement, managing timely submissions of proposals, working with faculty with little experience, and maintaining federal and private sector relations received the greatest attention. Other broad areas of interest to participants included: administrative monitoring tools, pre-award tasks, and post-award tasks.

#### **Section 4.7 - Video Taping of Symposia and Site Visits**

Global Communications Group, Inc., our sub-contractor, videotaped the four conferences and site visits. One hundred and seventy-five edited versions of each part were produced and mailed to all HBCUs/MIs eligible institutions and to others that were involved with this project. **Copies are provided with this report.**

**Part I - *A Live Videoconference: Infrastructure Development and  
(Two tapes) Programmatic Information***

Hosted by the University of the District of Columbia  
Washington, DC  
November 3, 1994

**Part II - *A Live Videoconference: Air Force Research  
(Three tapes) and Capability Enhancement Support Programs***

Hosted by the University of the District of Columbia  
Washington, DC  
November 4, 1994

**Part III - *A Conference and Site Visit for HBCUs/MIs  
(One tape) Research Scientists***

Hosted by Rome Laboratory  
Rome, NY  
October 16, 17, and 18, 1995

**Part IV - *A Conference for HBCUs/MIs Sponsored Program  
(One tape) Administrators***

Hosted by North Carolina A&T State University  
Greensboro, NC  
October 24, and 25, 1995

Reactions to the videotape series have been very positive. Sponsored program administrators are sharing the tapes with other administrators and they are making them available to chairpersons for viewing by faculty in their departments. Administrators seem more energized to work with faculty, to help them obtain more information about Air Force research opportunities, and to encourage them to follow-through with their intentions to pursue Air Force sponsored grants, contracts, and fellowships.

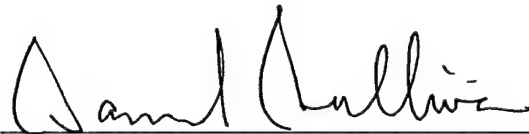
This concludes our final report.

\* \* \* \* \*



On behalf of the University of the District of Columbia and all Historically Black Colleges and Universities and Minority Institutions, we take this opportunity to thank our Program Manager, Dr. Harold Weinstock, for his many expressions of support during this contract. As a result of this effort, we believe that progress has been made and that HBCUs/MIs are closer to achieving the goal of our theme, "Meeting the Minority Challenge in Science and Technology: Institutional Capacity Building for Air Force Research."

Submitted by:

A handwritten signature in cursive script, reading "Samuel Sullivan", written over a horizontal line.

Samuel Sullivan, Co-Project Director

A handwritten signature in cursive script, reading "Leslie Speller", written over a horizontal line.

Leslie Speller, Co-Project Director

## *Appendices*

*Appendix - A*

UNIVERSITY OF THE DISTRICT OF COLUMBIA

*A Project of Technical Assistance  
to  
Historically Black Colleges and Universities  
and  
Minority Institutions*



"MEETING THE MINORITY CHALLENGE IN SCIENCE AND TECHNOLOGY:  
INSTITUTIONAL CAPACITY BUILDING FOR AIR FORCE RESEARCH"

**Alphabetical List**

**HBCUs and MIs that Offer the Baccalaureate Degree to Students  
Majoring in an Area of Science, Mathematics, or Engineering**

**July 31, 1996**

Supported by the Air Force Office of Scientific Research (AFOSR)  
Bolling AFB, D.C.

Institution/Address	Contact/Title	Phone/Fax/E-Mail
Alabama A&M University P.O. Box 411 Huntsville, AL 35762	Ms. Dianne Kirnes Director, Office of Sponsored Research, Grants, and Contracts	(205) 851-5675 (205) 851-5030 (FAX) amjxj01@asnaam.aamu.edu
Alabama State University 915 South Jackson Street Montgomery, AL 36101-0271	Dr. William Brock Interim Vice President for Planning and Institutional Advancement	(334) 229-4429 (334) 834-6861 (FAX) wbrock@asunet.alasu.edu
Albany State College 505 College Drive Albany, GA 31705	Dr. Ellis E. Sykes Coordinator, Office of Scientific Research	(912) 430-4823 (912) 430-4930 (FAX) esykes@rams.alsnet.peachnet.edu
Alcorn State University 1000 ASU Drive #690 Lorman, MS 39096	Dr. Leroy Davis, Dean Research, Extension and Applied Science	(601) 877-6136 (601) 877-6219 (FAX) ldavisasu@aol.com
Allen University 530 Harden Street Columbia, SC 29204	Dr. David T. Shannon, Sr. President	(803) 376-5701 (803) 376-5709 (FAX) auniv@minspring.com
Barber-Scotia College 145 Cabarrus Avenue West Concord, NC 28025	Ms. Joann Graham Title III Coordinator	(704) 793-4926 (704) 793-4899 (FAX) E mail: none
Barry University 11300 Northeast Second Avenue Lavole Building, Room 213 Miami, FL 33161	Dr. Joseph Monti Director, Office of Grant Programs	(305) 899-3072 (305) 899-3186 (FAX) monti@pcsa01.barry.edu
Benedict College Harden and Bland Sts. Columbia, SC 29204	Dr. Willease Sanders Asst. Vice President and Director of Sponsored Programs	(803) 253-5426 (803) 253-5194 (FAX) comgratt.aol.com
Bennett College 900 E. Washington Street Greensboro, NC 27401	Dr. Jean W. Humphrey Vice President for Sponsored Programs and Special Projects	(910) 370-8659 (910) 272-9143 (FAX) jhumphrey@bennett1.bennett.edu

Institution/Address	Contact/Title	Phone/Fax/E-Mail
Bethune-Cookman College 640 Dr. Mary Mcleod Bethune Blvd. Daytona Beach, FL 32114	Dr. Frederick T. Milton Vice President for Governmental Affairs	(904) 257-5230 (904) 238-6017 (FAX) milton@bethune.cookman.edu
Bloomfield College Bloomfield, NJ 07001	Dr. John F. Noonan President	(201) 748-9000 (201) 743-3998 (FAX) E mail: none
Bluefield State College 219 Rock Street Bluefield, WV 24701	Dr. Marvin W. Rogers Senior Administrator/Title III	(304) 327-4212 (304) 325-7747 (FAX) E mail: none
Bowie State University 14000 Jericho Park Road Bowie, MD 20715	Mr. Gilbert McDonald Director, Office of Sponsored Research	(301) 464-6580 (301) 464-7748 (FAX) g_mcdonald@boe00.minc.umd.edu
California State University - Dominguez Hills 1000 E. Victoria Street Carson, CA 90747	Dr. Leon S. Cohen Director, Office of Research and Funded Projects	(310) 516-3756 (310) 516-4410 (FAX) lcohen@dhvx20.csudh.edu
California State University - Fullerton 800 N. State College Blvd. Fullerton, CA 92634	Dr. Stuart Ross Director, Faculty Research and Development	(714) 773-2106 (714) 773-3000 (FAX) sross@fullerton.edu
California State University - Los Angeles 5151 State University Drive Administration 301 Los Angeles, CA 90032	Ms. Susan Steiner Director, Office of Sponsored Programs	(213) 343-5366 (213) 343-6430 (FAX) ssteine@calstatela.edu
Central State University 1400 Brushrow Road Wilberforce, OH 45384	Dr. Herman B. Smith, Jr. Interim President Office of Institutional Advancement	(513) 376-6333 (513) 376-6138 (FAX) E mail: none
Cheyney University of Pennsylvania Cheyney, PA 19319	Dr. Francine Jefferson Title III Administrator	(610) 399-2282 (610) 399-2210 (FAX) E mail: none

Institution/Address	Contact/Title	Phone/Fax/E-Mail
Chicago State University 9501 South King Drive Chicago, IL 60628	Dr. Samuel Grupper Acting Director, Office of Sponsored Programs	(312) 995-3598 (312) 995-3849 (FAX) E mail: none
Claflin College 700 College Street Avenue Orangeburg, SC 29115	Dr. Shingara Sandhu Director, Office of Sponsored Programs	(803) 535-5244 (803) 531-2860 (FAX) E mail: none
Clark Atlanta University James P. Brawley Drive at Fair St., S.W. Atlanta, GA 30314	Dr. Kofi B. Bota Vice President for Research and Sponsored Programs	(404) 880-6996 (404) 880-6880 (FAX) kbota@cau.edu
College of Aeronautics Laguardia Airport Flushing, NY 11371	Dr. John C. Fitzpatrick Vice President	(718) 429-6600 (718) 429-0256 (FAX) E mail: none
College of New Rochelle New Rochelle, NY 10805	Sr. Pat McLoughlin Director of Grants, Office of College Advancement	(914) 654-5234 (914) 654-5290 (FAX) E mail: none
College of Santa Fe 1600 St. Michaels Drive Santa Fe, NM 87501	Dr. William Sayre Chairperson, Science Department	(505) 473-6305 (505) 473-6504 (FAX) sayre@santefe.edu
Columbia Union College 7600 Flower Avenue Takoma Park, MD 20912	Dr. Lyn Bartlett Vice President for Academic Affairs	(301) 891-4116 (301) 891-4022 (FAX) E mail: none
Coppin State College 2500 West North Avenue Baltimore, MD 21216	Dr. Carole Watkins Director, Sponsored Programs and Title III Coordinator	(410) 383-5591 (410) 383-5369 (FAX) E mail: none
CUNY, City College Convent Avenue & 138th Street Administration Building, Room A-232 New York, NY 10031	Dr. Ellen Smiley Acting Assoc. Provost	(212) 650-8245 (212) 650-6425 (FAX) smiley@scisun.sci.ccny.cuny.edu

Institution/Address	Contact/Title	Phone/Fax/E-Mail
CUNY, Bernard M. Baruch College 79 Fifth Avenue New York, NY 10003	Dr. Allen Clark Dean for Research	(212) 886-2910 (212) 886-2832 (FAX) ahcrf@cunyvm.cuny.edu
CUNY, Medgar Evers College 101 West 31st Street, 12th Floor New York, NY 10001	Dr. Edwina Hamby Dean of Sponsored Programs	(212) 290-5755 (212) 290-5799 (FAX) E mail: none
CUNY, York College Room 2H04 94-20 Guy Brewer Boulevard Jamaica, NY 11451	Dr. Joan Appel Director of Sponsored Programs	(718) 262-2060 (718) 262-2786 (FAX) E mail: none
Delaware State University Cottage 504 1200 North Dupont Highway Dover, DE 19901	Dr. Mildred Huff Ofosu Director, Office of Sponsored Programs	(302) 739-3840 (302) 739-4294 (FAX) h.reed@dsu.edu
DeVry Institute of Technology 1221 North Swift Road Addison, IL 60101	Dr. Jerri Dill President	(708) 953-1300 (708) 953-1236 (FAX) E mail: none
DeVry Institute of Technology 901 Corporate Center Drive Pomona, CA 91768	Dr. Gregory Strick Dean, Academic Affairs	(800) 243-3660 Ext.200 (909) 622-0936 (FAX) gstrick@admin.pom.devry.edu
DeVry Institute of Technology 250 N. Arcadia Avenue Decatur, GA 30030	Mr. Ray Bass Academic Dean	(800) 221-4771 Ext.276 (404) 292-2248 (FAX) rbass@admin.atl.devry.edu
Dillard University 2601 Gentilly Boulevard New Orleans, LA 70122	Dr. Clifford V. Johnson Vice President for Development	(504) 286-4666 (504) 286-4890 (FAX) E mail: none
Edward Waters College 1658 Kings Road Jacksonville, FL 32209	Mr. Howard Henderson Vice President for Institutional Advancement	(904) 366-2729 (904) 366-2544 (FAX) E mail: none



Institution/Address	Contact/Title	Phone/Fax/E-Mail
Elizabeth City State University Campus Box 864 1704 Weeksville Road Elizabeth City, NC 27909	Dr. James McLean Director, Office of Sponsored Programs, Contracts, and Grants	(919) 335-3250 (919) 335-3542 (FAX) prjmclean@alpha.ecsu.edu
Fayetteville State University 1200 Murchinson Road Fayetteville, NC 28301-4298	Ms. Beverly Warren Coordinator, Office of Grants and Research	(910) 486-1498 (910) 486-1782 (FAX) prbwarren@hazel.uncssu.edu
Fisk University 1000 17th Avenue, North Nashville, TN 37208-3051	Mr. George Carpenter Director, Office of Sponsored Programs	(615) 329-8531 (615) 329-8711 (FAX) E mail: none
Florida A&M University Foote-Hilyer Adminstration Center Suite 400 Tallahassee, FL 32307	Dr. Franklin D. Hamilton Director, Office of Sponsored Research	(904) 599-3531 (904) 599-3952 (FAX) sponsor@ns1.famu.edu
Florida International University Park-Tamiami Trail, PC 539 Miami, FL 33199	Dr. Catherine Thurman Director, Office of Sponsored Research	(305) 348-2494 (305) 348-4117 (FAX) thurmanc@servax.fiu.edu
Florida Memorial College 15800 42nd Avenue Miami, FL 33054	Dr. Karl S. Wright Vice President for Academic Affairs	(305) 623-4223 (305) 623-4221 (FAX) kswright@gate.net
Fort Valley State University 1005 State College Drive Fort Valley, GA 31030-3298	Ms. Dorothy L.M. Crumbly Director, Office of Development and Title III	(912) 825-6397 (912) 825-6461 (FAX) dcrumbly@fvs3.fvsc.peachnet.edu
Grambling State University Adams Hall, Room 206 RWE Jones Drive Grambling, LA 71245	Dr. Glenda Island Coordinator, Office of Grant Development	(318) 274-3231 (318) 274-7373 (FAX) E mail: none
Hampton University Hampton, VA 23668	Dr. Calvin Lowe Vice President for Research	(804) 727-5311 (804) 727-5085 (FAX) lowe@hamptonu.edu

Institution/Address	Contact/Title	Phone/Fax/E-Mail
Harris-Stowe State College 3026 Laclede Avenue St. Louis, MO 63103	Ms. Patricia Barton Director, Office of Sponsored Programs	(314) 340-3543 (314) 340-3550 (FAX) bartonp@mail1.hssc.edu
Howard University 2400 6th St., N. W. Box 1071 Washington, DC 20059	Dr. Gary L. Harris Interim Assoc. Vice President for Research	(202) 806-5567 (202) 806-5523 (FAX) gharris@msrce.howard.edu
Huston-Tillotson College 900 Chicon Street Austin, TX 78702	Dr. Lenora D. Waters Vice President for Academic Affairs	(512) 505-3076 (512) 505-3190 (FAX) E mail: none
Illinois Institute of Technology Main Building, Room 306 3300 S. Federal Street Chicago, IL 60616	Ms. Tina Bottini Director, Office of Research Administration	(312) 567-3035 (312) 567-6900 (FAX) E mail: none
Incarnate Word College 4301 Broadway San Antonio, TX 78209	Dr. Louis J. Agnese, Jr. President	(210) 829-3900 (210) 829-6096 (FAX) agnese@the-college,iwctx.edu
Inter-American University of Puerto Rico GPO Box 36255 San Juan, PR 00936-3255	Ms. Ava Morales External Liaison, Office of External Resources	(809) 758-0899 (809) 759-9680 (FAX) E mail: none
Jackson State University Box 17095 1400 J.R. Kynch Street Jackson, MS 39217	Dr. Bettye Ward Fletcher Vice President for Research and Development	(601) 968-2931 (601) 973-3664 (FAX) bwfletch@ccaix.jsums.edu
Jarvis Christian College Drawer G Hawkins, TX 75765	Ms. Deborah Moore Director, Sponsored Programs and Grants Management	(903) 769-5833 (903) 769-4842 (FAX) E mail: none
Johnson C. Smith University 100 Beatties Ford Road Charlotte, NC 28216	Dr. Perna Carter Director, Office of Sponsored Programs	(704) 378-1202 (704) 378-3521 (FAX) E mail: none

Institution/Address	Contact/Title	Phone/Fax/E-Mail
Kentucky State University Room 101, Hume Hall Frankfort, KY 40601	Mr. Kenneth R. Miller Director, Office of Institutional Advancement	(502) 227-6511 (502) 227-6995 (FAX) kmiller@gwmail.kysu.edu
Knoxville College 901 College Street Knoxville, TN 37921	Dr. Jesse James Executive Vice President for Institutional Research and Planning	(423) 524-6595 (423) 524-6603 (FAX) E mail: unable to obtain
Lane College 545 Lane Avenue Jackson, TN 38301	Dr. Wesley McClure President	(901) 426-7595 (901) 427-3987 (FAX) mcclure@lane.jsccl.cc.tn.us
Langston University University Women Building, Room 203 Highway 33 Langston, OK 73050	Dr. Elijah K. Martin, Jr. Director, Office of Sponsored Programs	(405) 466-2910 (405) 466-2915 (FAX) E mail: none
Lemoyne-Owen College 807 Walker Avenue Memphis, TN 38126	Dr. Harmon Dunathan Director, Office of Research and Sponsored Programs	(901) 942-7393 (901) 942-7809 (FAX) E mail: none
Lincoln University 820 Chestnut Street Young Hall, Room B-2 Jefferson, MO 65102	Dr. Arnold G. Parks Director, Office of Sponsored Research	(314) 681-5580 (314) 681-5981 (FAX) grants@lincolnu.edu
Lincoln University of Pennsylvania Wright Hall Lincoln, PA 19352	Dr. Willie Williams Director, Laser Program	(610) 932-8107 (610) 932-1054 (FAX) E mail: none
Livingstone College 701 W. Monroe Street Salisbury, NC 28144	Ms. Catreliia Hunter Director, Office of Grants Management	(704) 638-5710 or 5729 (704) 638-5667 (FAX) E mail: none
Martin University 2171 Avondale Place Indiannapolis, IN 46218	Sr. Jane Schilling Vice President for Academic Affairs	(317) 543-4890 (317) 543-4790 (FAX) E mail: none

Institution/Address	Contact/Title	Phone/Fax/E-Mail
Marygrove College 8425 West McNichols Road Detroit, MI 48221	Dr. Milton Snyder Coordinator, Grants Research	(313) 927-6569 (313) 864-6677 (FAX) E mail: none
Miles College P.O. Box 3800 Birmingham, AL 35208	Mr. Cleophos Vann Director, Office of Grants and Contracts	(205) 923-2771 Ext. 292 (205) 923-9292 (FAX) E mail: none
Mississippi Valley State University 14000 U.S. Highway 82, West Itta Bena, MS 38941-1400	Mr. Thomas Crittenden Acting Executive Director, Office of Institutional Advancement	(601) 254-3573 (601) 254-3000 (FAX) E mail: none
Morehouse College 830 Westview Drive, S.W. Atlanta, GA 30314	Dr. Weldon Jackson Vice President for Academic Affairs	(404) 215-2647 (404) 659-6536 (FAX) jacksonw@mhous2.auc.edu
Morgan State University 217 Calloway Hall Coldspring Lane/Hillen Road Baltimore, MD 21239	Dr. Edet E. Isuk Asst. Vice President for Sponsored Programs	(410) 319-3447 (410) 319-3963 (FAX) eisuk@moac.morgan.edu
Morris Brown College 643 Martin Luther King, Jr. Drive, N.W. Atlanta, GA 30314	Dr. Michael Ralph Director, Office of Sponsored Research	(404) 220-0130 (404) 220-3700 (FAX) E mail: none
Morris College 100 West College Street Sumter, SC 29150	Dr. Mary Vereen-Gordon Academic Dean	(803) 775-9371 (803) 773-3687 (FAX) E mail: none
Mount Saint Mary's College 12001 Chalon Road Los Angeles, CA 90049	Sr. Karen Kennelly President	(310) 476-2237 (310) 476-9296 (FAX) kmpres@aol.com
New Mexico Highlands University Rodgers Administration Building Las Vegas, NM 87701	Dr. John R. Juarez Assoc. Vice President, Office of Sponsored Research and Planning	(505) 454-3311 (505) 454-3110 (FAX) john_pacheco@merlin.nmhu.edu

Institution/Address	Contact/Title	Phone/Fax/E-Mail
New Mexico State University Main Campus, Box 3Z Las Cruces, NM 88003	Ms. Nellie Quesada Aragon Director, Office of Sponsored Programs	(505) 646-2306 (505) 646-6187 (FAX) maaragon@nmsu.edu
Norfolk State University 2001 Corprew Avenue Norfolk, VA 23504	Ms. Paula R.D. Shaw Asst. Vice President, Office of Development	(804) 683-8323 (804) 683-2405 (FAX) pshaw@vger.nsu.edu
North Carolina A&T State University 1602 East Market Dowdy Bldg, Rm 305 Greensboro, NC 27411	Dr. Earnestine Psalmonds Vice Chancellor for Research	(910) 334-7995 (910) 334-7086 (FAX) ep@ncat.edu
North Carolina Central University 160 Alexander Dunn Bldg 1801 Durham, NC 27707	Dr. Benjamin F. Speller, Jr., Director, Office of Sponsored Research and Programs	(919) 560-3333 (919) 560-5239 (FAX) E mail: none
Oakwood College Blake Center Oakwood Road, N.W. Huntsville, AL 35896	Dr. Rose Yates Asst. Vice President, Office of Grants and Contracts	(205) 726-7493 (205) 726-7404 (FAX) E mail: none
Our Lady of Lake University 411 S.W. 24th Street San Antonio, TX 78207	Sr. Elizabeth A. Sueltenfuss President	(210) 434-6711 (210) 436-0824 (FAX) suele@lake.ollusa.edu
Paine College 1235 15th Street Augusta, GA 30910	Mr. James M. Hinton Director, Federal Relations and Title III	(706) 821-8227 (706) 821-8293 (FAX) E mail: none
Paul Quinn College 3837 Simpson-Stuart Road Dallas, TX 75241	Ms. Jacqueline Bell Coordinator, Federal and Foundation Relations	(214) 302-3504 (214) 302-3559 (FAX) E mail: none
Philander Smith College 812 West 13th Street Little Rock, AR 72202	Dr. Mckinley Newton Vice President, Institutional Advancement & Title III	(501) 370-5265 (501) 370-5278 (FAX) mnewton@philander.edu

Institution/Address	Contact/Title	Phone/Fax/E-Mail
Pontifical Catholic Univ. of Puerto Rico 2250 Los Americas Avenue, Suite 563 Ponce, PR 00731-6382	Mrs. Gilda Rivera Director, Office of External Resources	(809) 841-2000 Ext. 386 (809) 840-4295 (FAX) E mail: none
Prairie View A&M University P.O. Box 2355 Prairie View, TX 77446	Dr. Willie F. Trotty Dean, Graduate School and Research	(409) 857-2315 or 2193 (409) 857-4521 (FAX) willie_trotty@pvamu.edu
Rust College 150 E. Rust Avenue Holly Springs, MS 38635	Ms. Christine Radcliff Director, Office of Grants Research	(601) 252-8000 Ext. 4007 (601) 252-6107 (FAX) E mail: none
Savannah State College P.O. Box 20503 Savannah, GA 31404	Mr. Tyrone Eaton Director, Research and Sponsored Programs	(912) 356-2238 (912) 356-2299 (FAX) eatont@mb.ssc.peachnet.edu
Selma University 1501 Lapsley Street Selma, AL 36701	Dr. Moses Clark Vice President for Academic Affairs	(334) 872-5600 Ext. 29 (334) 872-7746 (FAX) E mail: none
Shaw University 118 East South Street Raleigh, NC 27611	Dr. Lillie Boyd Director, Office of Sponsored Programs	(919) 546-8395 (919) 546-8484 (FAX) E mail: none
Shorter College 604 Locust Road North Little Rock, AR 72114	Ms. Jennifer Hannah Director, Office of Development	(501) 374-6305 Ext. 219 (501) 374-9333 (FAX) E mail: none
Sinte Gleska University Box 490 Rosebud, SD 57570	Ms. Cheryl Crazy Bull Vice President	(605) 747-2263 (605) 747-2098 (FAX) E mail: none
Sojourner-Douglass College 500 N. Caroline Street Baltimore, MD 21205	Dr. Andrew Jones Provost	(410) 276-0306 (410) 675-1810 (FAX) E mail: none

Institution/Address	Contact/Title	Phone/Fax/E-Mail
South Carolina State College Belcher Hall Orangeburg, SC 29117	Mr. Elbert Malone Director, Office of Research and Grant Administration	(803) 536-8213 (803) 533-3679 (FAX) maolne@scsu.scsu.edu
Southern University - Baton Rouge P.O. Box 12596 Baton Rouge, LA 70813	Dr. Rose Glee Director, Office of Sponsored Programs	(504) 771-2809 (504) 771-5231 (FAX) rgleeosp@tyrell.net
Southern University - New Orleans 6400 Press Drive New Orleans, LA 70126	Dr. George Amedee Director of Grants, Sponsored Research, and Development	(504) 286-5000 (504) 286-5131 (FAX) E mail: none
Spelman College 350 Spelman Lane S.W. Atlanta, GA 30314-4399	Ms. Olivia Scriven Director, Office of Sponsored Programs	(404) 223-1487 (404) 223-1490 (FAX) oscriven@auc.edu
St. Augustine's College 1316 Oakwood Avenue Raleigh, NC 27611-2298	Dr. Furney Brown Director, Governmental Affairs and Special Projects	(919) 516-4278 (919) 516-4292 (FAX) E mail: none
St. Mary's University One Camino Santa Maria San Antonio, TX 78284	Rev. John Moder President	(210) 436-3011 (210) 431-2226 (FAX) moder@vax.stmarytx.edu
St. Paul's College 115 College Drive Lawrenceville, VA 23868	Dr. James B. Gunnell Asst. Vice President, Office of Sponsored Federal Programs	(804) 848-3797 (804) 848-0618 (FAX) gunnell@norfolk.infi.net
St. Thomas University 16400 N.W. 32nd Avenue Miami, FL 33054	Msgr. Franklyn M. Casale President	(305) 625-6000 (305) 628-6510 (FAX) E mail: none
Stillman College P.O. Box 1430 Tuscaloosa, AL 35403	Mr. Marion F. Combs Executive Director, Office of Institutional Research	(205) 349-4240 (205) 758-0821 (FAX) E mail: none

Institution/Address	Contact/Title	Phone/Fax/E-Mail
Sul Ross State University Alpine, TX 79832	Dr. R. Victor Morgan President	(915) 837-8032 (915) 837-8334 (FAX) rvmorgan@sulross1.sulross.edu
Talladega College 627 West Battle Street Talladega, AL 35160	Dr. Roberta Jones Booker Director, Sponsored Programs and Alumni Affairs	(205) 761-6202 (205) 362-2268 (FAX) E mail: none
Tennessee State University 3500 John A. Merritt Blvd Nashville, TN 37209	Dr. Maurice Mills Director, Office of Sponsored Research	(615) 963-7660 (615) 963-5068 (FAX) millsm@harpo.tnstate.edu
Texas A&M International University 5201 University Boulevard Laredo, TX 78041-1999	Ms. Concepcion Hickey Director, Special Projects	(210) 326-2134 (210) 326-2129 (FAX) chickey@tamiu.edu
Texas A&M University - Kingsville 230 College Hall Engineering Ave. at University Blvd. Kingsville, TX 78363	Ms. Susan W. Sedwich Director, Office of Sponsored Research	(512) 593-3344 (512) 593-3409 (FAX) ssedwick@tamuk.edu
Texas Southern University 3100 Cleburne Houston, TX 77004	Dr. Barbara Hayes Interim Dean Graduate School and Research Studies	(713) 313-7233 or 7457 (713) 313-1876 (FAX) gra_hayes@tsu.edu
The National Hispanic University 14271 Story Road San Jose, CA 95127	Dr. B. Roberto Cruz President	(408) 254-6900 (408) 254-1369 (FAX) rcruz@nhu.edu
Tougaloo College 500 West County Line Road Tougaloo, MS 39174	Dr. Asoka Spinivasan Professor, Biology Department	(601) 977-7781 (601) 977-7739 (FAX) E mail: none
Tuskegee University Carver Research Foundation, Room 6 Tuskegee, AL 36088	Dr. Walter Sapp Assoc. Provost and Director Office of Sponsored Programs	(334) 727-8961 (334) 727-2069 (FAX) wsapp@acd.tusk.edu



Institution/Address	Contact/Title	Phone/Fax/E-Mail
University of Arkansas at Pine Bluff Box 4094 Pine Bluff, AR 71601	Dr. William M. Willingham Director, Pine Bluff Research Center	(501) 543-8054 (501) 543-8055 (FAX) jordan_v@vx4500.uapb.edu
University of Guam UOG Station Mangilad, Guam 96923	Dr. Daniel Lennon Director, Office of Sponsored Research	011 671 734-5213 011 671 734-2296 (FAX) E mail: none
University of Hawaii at Hilo Hilo, HI 96720	Dr. Kenneth L. Perrin Chancellor	(808) 933-3461 (808) 933-3622 (FAX) chiyo@uhnix.uhcc.hawaii.edu
University of Hawaii at Manoa 2444 Dole Street Honolulu, HI 96822	Dr. Kenneth P. Mortimer Chancellor	(808) 956-8111 (808) 956-5286 (FAX) E mail: none
University of Houston - Downtown 1 Main Street Houston, TX 77002	Dr. Max Castillo President	(713) 221-8000 (713) 221-8064 (FAX) castillo@dt.uh.edu
University of Maryland - Eastern Shore 1129 Early Childhood Center Princess Anne, MD 21853	Dr. Catherine Bolek Director, Office of Sponsored Research	(410) 651-6714 (410) 651-7768 (FAX) cbolek@umes_bird.umd.edu
University of New Mexico College of Engineering, Annex 209 Albuquerque, NM 87131-1381	Dr. Ricardo Maestas Director, Minority Engineering Programs	(505) 277-1417 (505) 277-5476 (FAX) rmaestas@unm.edu
University of Puerto Rico - Rio Piedras P.O. Box 23302 Rio Piedras, PR 00931-3304	Dr. Annette Lopez De Mendez Director, Educational Research Center	(809) 764-0000 Ext. 4382 (809) 764-2929 (FAX) E mail: none
University of Puerto Rico at Humacao CUH Station Humacao, PR 00791	Mrs. Enid Garcia-Ortiz Director, Office of External Resources	(809) 850-9343 (809) 850-9371 (FAX) e_garcia@cuhacl.upr.clu.edu

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*Appendix - B*

# UNIVERSITY OF THE DISTRICT OF COLUMBIA

*A Project of Technical Assistance  
to  
Historically Black Colleges and Universities  
and  
Minority Institutions*



**"Meeting the Minority Challenge in Science and Technology:  
Institutional Capacity Building for Air Force Research"**

## ***PARTICIPATING HBCU/MIs***

**Alabama A&M University**

**Elizabeth City State University**

**Barry University**

**Fayetteville State University**

**Bowie State University**

**Fisk University**

**California State University, Dominguez Hills**

**Florida International University**

**Clark Atlanta University**

**Fort Valley State College**

**CUNY, City College**

**Grambling State University**

**Delaware State University**

**Hampton University**

**Dillard University**

**Howard University**

Jackson State University	Texas A&M International University
Knoxville College	<b>Texas A&amp;M University - Kingsville</b>
<b>Langston University</b>	<b>Texas Southern University</b>
Lincoln University, Pennsylvania	<b>Tougaloo College</b>
<b>Mississippi Valley State University (Revised)</b>	<b>University of Puerto Rico - Humacao</b>
Morgan State University	<b>University of Puerto Rico - Rio Piedras</b>
<b>Morris Brown College</b>	University of Texas at Brownsville
New Mexico Highlands University	<b>University of the District of Columbia</b>
North Carolina A&T State University	<b>University of the Virgin Islands</b>
<b>North Carolina Central University</b>	<b>Virginia State University</b>
Prairie View A&M University	<b>Wilberforce University</b>
<b>Southern University and A&amp;M College</b>	<b>Winston-Salem State University</b>
<b>St. Augustine College</b>	<b>Xavier University of Louisiana</b>

HBCUs/MIs in **BOLD LETTERING** are those that indicated their need for technical support.

*Appendix - C*

## MEMORANDUM FOR THE RECORD

TO: Members of the Advisory Council

FROM: Robert O. Goodman (Recorder)

SUBJECT: Advisory Council Meeting, January 19, 1995  
The Hilton Hotel, Baton Rouge, LA.

The University of the District of Columbia (UDC), Southern University - Baton Rouge (SUBR), and the Air Force Office of Scientific Research (AFOSR) Advisory Council winter meeting was held in Baton Rouge, LA, January 19, 1995.

### ATTENDEES

#### The University of the District of Columbia

Dr. Samuel Sullivan, Associate Provost & V.P. Academic Affairs  
Dr. Leslie C. Speller, Chair, Department of Physics  
Mr. Lawrence Barnes, Director, Grants Administration  
Robert O. Goodman, Esq. Attorney at Law & Consultant

#### Air Force Office of Scientific Research

Dr. Harold Weinstock, AFOSR Program Manager  
Lt. Col. Eddie Mims, USAF OSDBU - HBCU Program Manager

#### Knoxville College

Dr. Lois S. Williams, President

#### Tractell, Inc.

Dr. Eugene Jones, President

#### North Carolina State A&T University

Dr. Ernestine Psalmonds, Vice Chancellor for R&D

#### Morgan State University

Dr. Conrad Williams, Professor of Physics

#### Southern University - Baton Rouge

Dr. Rose Glee, Director, Sponsored Programs Office

#### Hampton University

Dr. Demetrius D. Venable, Executive V.P. & Provost (Excused)



## INTRODUCTION

Dr. Sullivan opened the meeting with an overview of the background, objectives and scope of the Technical Assistance contract. Participants introduced themselves and gave a brief statement of their background and their involvement with this project.

## VIDEOCONFERENCE FOLLOW-UP SURVEY

Discussed the "Follow-up Survey" on the UDC/AFOSR Videoconference "Meeting the Minority Challenge in Science and Technology: Institutional Capacity Building for Air Force Research," held 4 November 1994 on the UDC campus. To date, there have been nine responses. The broadcast was received on 87 campuses. Each of the nine respondents had science and/or engineering programs at the Bachelor and above levels.

## PRE-BROADCAST ACTIVITY

HBCUs/MIs were contacted to determine their downlink capability and to inform them of the videoconference agenda and date. From these initial contacts, a database of institutions, media persons and other personnel, telephone numbers and facsimile numbers were compiled. Source lists included but were not limited to: (a) the 99 institutions on the Black College Satellite Network (BCSN) - (Note: Colleges and universities on that list that do not have satellite downlinks receive programs through local cable access stations.) (b) the 1994 Higher Education Directory, 12th Edition, (c) An Inventory of the Capabilities of the HBCUs/MIs, a NAFEO/DoD Survey, Third Edition (1993), (d) a list of directors of sponsored program offices at colleges where they were identified, and (e) lists of key personnel in the HBCU/MI community, e.g., deans, chairs, department heads, faculty, etc. Information concerning the event was sent to presidents and chancellors at each institution via mailing, facsimile, and telephone. Recommendations: To improve coverage and ensure a timely response, pre-broadcast activity should include the use of: 1) Tractell, Inc.'s mailing list and e-mail address system, 2) the CBD Special Notices section, and 3) the FEDIX/MOLIS bulletin board, points of contact and mailing lists.

## EVALUATION OF THE VIDEOCONFERENCE

Statistical data would be useful in evaluating the effect and impact of the conference. The following points among others, were discussed:

1. The quality of the reception of the program.
2. The number of people that viewed the program.
3. Did the institution video tape the program?
4. Were the program content useful to the audience?
5. What changes, if any, would the participants recommend?
6. Were the day, time and length of the broadcast satisfactory?

7. Did the date of the broadcast fit into the college calendar?
8. Will edited/indexed videotapes be made available?
9. The shelf life of the material taped at the conference.
10. Strategic planning for the next event.
11. The role of DTIC and other defense agencies.
12. Improve reaction time by HBCUs/MIs to program announcements.

Recommendations: A key person should be appointed by the president and paid by conference sponsors to gather needed information on subsequent videoconferences. Downlink sites should be instructed to contact the uplink site when broadcasts are being received, or report difficulties encountered, if any. That person would be responsible for posting information for general consumption, contacting key staff and faculty, senior leadership of the institution, monitoring the broadcast and gathering data to evaluate the "success" of the event. The uplink site should provide agenda, abstracts of the information to be covered, resumes of presenters, and technical data on frequency, channel and range of coverage of the event. Media personnel must be contacted and kept in the loop. DTIC should be consulted about editing capabilities, storage and distribution of videoconference material.

AFOSR: Infrastructure assistance for fiscal years 1995 - 1996. AFOSR/Air Force Material Command should consider including computer hardware and software upgrades at HBCUs/MIs to assist in overcoming existing communication barriers at these schools, e.g., Internet.

### INFRASTRUCTURE ASSISTANCE

Discussed the need for infrastructure assistance to increase the number of African American scientists, engineers and mathematicians graduating from HBCUs. The output of scientists, engineers and mathematicians has been relatively constant since the early 1970s. Some reasons noted for this flat output rate at HBCUs show that majority institutions now heavily recruit minority students. Some universities with a handful of blacks in the '60s now have hundreds.

It is important to note that Black colleges enroll only 16 percent of black college students, but graduate nearly one third of those earning a bachelor's degree. More than 40 percent of blacks who receive a Ph.D. first attended a Black college. In the sciences, it is more than 50 percent. (Source: The Washingtonian, November 1994.)

The decline in African American Ph.D.'s will have a long term negative effect on the ability of HBCUs to function as research institutions. AFOSR's ASPIRE program was initiated to resolve this potentially debilitating and urgent problem. There will be two schools chosen for ASPIRE awards. Although the word "minority" is deleted from the criteria for ASPIRE awards, the design of the program ensures that HBCUs and Minority Institutions will participate.

Several members indicated that while the information concerning Air Force programs may be available, infrastructure needed to implement them is not. We should construe infrastructure broadly to include not only facilities, instrumentation, and technology, but administration systems and human resource development. Without administrative systems (read sponsored programs offices) and qualified technical personnel to manage research programs, especially contract administration, there will not be successful research initiatives.

### PARTNERING

Partnering with majority colleges, universities and federal agencies has been offered as a strategy to improve academic programs and research capabilities of the HBCUs and MIs. The perception that some majority institutions want to partner with HBCUs and MIs, only if they get the lion's share of project funding, is a concern. The exact percentage that should be split between the partners was not at issue, but the minority partner should obtain a fair share of the funding. Depending on the strength of the minority partner, possibly as much as 75 percent of the funding should go to the HBCU or MI.

### PIPELINE ISSUES

One approach to increasing the number of minority (African American) graduate students suggests that students should remain at the HBCU where they received their undergraduate degrees for their graduate degrees. Others stated that a better way would be to have minority students attend other institutions for their graduate education experience. The consensus of opinion at the table was that the latter strategy was preferable to the former. Anecdotal comments suggest that HBCUs have success with graduate students because they provide support systems, a nurturing environment and role models for their students.

One panelist observed that a large percentage of faculty at HBCUs are foreign born non-African Americans, and that the percentage is growing. This result must be reversed if the HBCU as an institution is to survive and prosper in the 21st century. Several sources were cited to support this contention. It was suggested that the AFOSR program should focus on this potential problem in the out years of this technical assistance effort. Considerable support was voiced for a more focused program by AFOSR to increase the number of African-American graduate students and to assist in solving this "real problem." It was further suggested that such an initiative should be started at those colleges and universities with a "track record" in research and development and with the concomitant capabilities and facilities.

### RETENTION

When students are admitted to a university or college there is an implied contract between the institution and the student. It should be that if students apply themselves and "play by the rules," they will graduate in a reasonable period. While no statistical evidence was offered in support of this contention, popular opinion was that with an aggressive

retention strategy there would be enough minority students sufficient to supply our projected needs.

The issue of role models was discussed. Dr. Anthony Johnson, a physicist at Rutgers University, is an example of the type of role model that would attract and retain minority and majority students. A strong orientation to research also attracts students. Having this orientation at HBCUs and MIs would increase the number of students interested in science, engineering and mathematics careers.

There is also a need to return to basics to prepare students for advanced educational opportunities. HBCUs/MIs by concentrating on the basics will give students these skills. High schools in minority communities are not preparing students for the challenge of undergraduate education. HBCUs and MIs must concentrate on giving students exposure to calculus, biology, computer science and other academic disciplines. AFOSR (DoD) could make a serious effort to support HBCUs and MIs by strengthening engineering, science and mathematics programs at these institutions.

DoD's goals are too global. They should be focused on the specifics of increasing participation of HBCUs and MIs, and increasing the numbers of minority students graduating from these schools prepared to enter graduate education in S.E.M. & T. The mission of DoD is spelled out in the legislation authorizing this program and does not necessarily include this noteworthy goal. Pub. L. 99-661, section 1207 and its progeny are focused on the institutional infrastructure not the individual. An argument can be made that infrastructure enhancement includes faculty, administration, facilities and equipment and developing human resource potential, i.e., students.

Endlessly debating whether HBCUs and MIs should be teaching institutions or research institutions do not bring us any closer to improving the output of these institutions. They are not monolithic entities and serve a variety of needs. HBCUs and MIs must identify the long term (strategic) requirements for the mission they have set for themselves. Where there is congruence with the objectives and direction of Air Force projects and programs and the mission of these institutions, both can come to the table and discuss how and if they can work together to reach mutually stated goals.

How can we identify those colleges and universities that meet or do not meet the needs of Air Force programs? The simple answer is they must identify themselves. Institutions must make a commitment from the top, if they want to "play in this game." Funds may not be available to build buildings and other facilities (bricks and mortar) but there can be programs to provide and enhance research services.

How many undergraduates do you need to produce one Ph.D.? The ratio is estimated to be 161:1. That would argue for emphasis and priority being placed on undergraduate education and a simultaneous focus on graduate programs. This would further indicate a need for technical assistance in both areas.

## ARTICLE

At the beginning of the afternoon session copies of the article, "A Separate Peace," an interview with the Honorable William H. Gray, published in the November 1994 issue of the Washingtonian magazine was distributed. (The author, national editor Ken Adelman, a newspaper columnist, has conducted more than 70 "What I've Learned" interviews since 1988.)

## INSTITUTIONAL QUESTIONNAIRE

Dr. Glee reviewed the Institutional Questionnaire that was prepared and analyzed under her supervision. There was a 30 percent response to the questionnaire. The questionnaire highlighted needs in the following areas:

- Sponsored programs offices and personnel
- Matching and cost sharing funds
- Technical assistance for funds management
- Contract management versus grant management
- Collaboration and partnership relationships

There was limited interest in training for proposal development and submission. Historically, as many as 80 percent of the proposals submitted from HBCUs to Wright Paterson Laboratories were considered non-competitive in terms of presentation and substance. The sponsored programs office is important, but it alone cannot guarantee that the quality of proposals will be improved.

The question of whether contracting out training in the above areas of need, including the preparation (writing) of proposals, would be a good strategy to pursue? Institutions need infrastructure assistance in many forms, tailored to the needs of the institution. One size does not fit all. Training programs should be made available on an as required basis.

One need is that of sponsored program offices and personnel. The program and structure offered by Dr. Psalmonds were accepted as a generic paradigm for efficient operation of a sponsored programs office. While an institution may not be able to start at that level, it may be possible to attain that level of sophistication, over time. Moreover, that structure may be customized to the individual needs of the institution.

AFOSR should provide assistance by installing and maintaining accounting systems, research equipment and personnel training programs. In the past, AFOSR has allowed as much as 20 percent of the contract or grant to be used for equipment purchases. With the reorganization and downsizing of Air Force Material Command (AFMC) laboratories, some equipment may become available for distribution to HBCUs/MIs under the surplus equipment program. The availability of scientists at laboratories where programs are being downsized should also be investigated. Scientists should be recruited as faculty members at HBCUs/MIs.

## PLANNING

It was agreed that there should be a DoD Omnibus plan, "roadmap," to address the requirements and direction of the HBCU/MI program. There should be a single plan that describes the focus and support available for DoD's HBCU/MI program. The U.S. Air Force Secretariat is preparing an outline for such a plan for the Air Force.

Would the Air Force consider funding salaries for the establishment, or enhancement of sponsored program offices? Some HBCUs/MIs may not necessarily want or need hands-on assistance or direct interaction with their programs. They may opt for a review and audit of sponsored programs offices, their management and systems, and request recommendations for achieving the next level of proficiency.

## VENUES FOR INTERACTION WITH COLLEGE PRESIDENTS AND CHANCELLORS

NAFEO Spring 95 National Conference will be held in Washington, D.C. (AFOSR could set up a workshop at the National Conference for the senior leadership of these institutions.) Disadvantage: During this annual meeting, presidents and chancellors are in high demand and as a result, AFOSR may not be able to get a sufficient number of them to be present for the workshop.

Hold regional conferences specifically for senior leadership within the region selected. Disadvantage: It is difficult to get presidents to attend these regional meetings. At the recent Videoconference held November 4, 1994, many schools were represented, but only a few presidents/chancellors were able to attend.

Ask to be put on the program for the annual Presidential Peer Seminar held annually in Hilton Head, South Carolina during the first week in August. About 30-40 presidents and chancellors attend this meeting. Disadvantage: A few HBCU institutions are not members of NAFEO and may not attend.

Ask UDC to coordinate a committee or task force of senior leadership to prepare a report on their needs and requirements after studying the plan to be prepared by the Air force Secretariat, or other projects of interest to AFOSR. The deliverable would be an analysis of what is needed at each institution to participate in the AFOSR program. The report should reflect the needs of the institutions bottom up, not top down.

## SUMMARY

AFOSR program initiatives should be improved by having HBCUs/MIs participate with it in the development of an Omnibus plan to address HBCU/MI program needs.

Infrastructure should be as broadly construed as possible. The main thrust should be to improve the academic, administrative and technical capabilities of HBCUs/MIs. In

addition, infrastructure training should include instruction on the management of contracts and grants in sponsored programs offices.

Technology enhancements to improve the content and flow of information on campus should be considered a priority for AFOSR (DoD), i.e., computer hardware and software upgrade, access to the internet, bulletin boards, distance learning, etc.

One of the primary goals of this program should be to increase the number of quality proposals submitted to DoD from HBCU/MIs.

Advisory council meetings should be held regularly, and as required.

AFOSR should include new initiatives in its FY 1996 programs that are designed to increase the number of African American scientists and scholars teaching at HBCU/MIs. New initiatives should also focus more on increasing the number of graduate students at HBCU/MIs.

Air Force laboratories should be encouraged to increase their interaction and programs with HBCU/MI faculty and students.

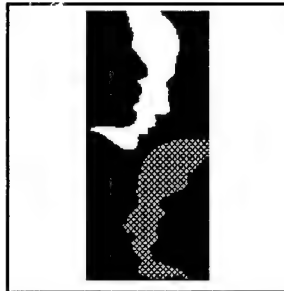
The Air Force Institute of Technology (AFIT) will be asked to audit graduate programs and make recommendations to enhance curricula and propose other changes, if required, and use some of its resources to improve those programs at HBCUs/MIs.

*Appendix - D*



UNIVERSITY OF THE DISTRICT OF COLUMBIA

*A Project of Technical Assistance  
to  
Historically Black Colleges and Universities  
and  
Minority Institutions*



"MEETING THE MINORITY CHALLENGE IN SCIENCE AND TECHNOLOGY:  
INSTITUTIONAL CAPACITY BUILDING FOR AIR FORCE RESEARCH"

**Research Areas of Select HBCUs/MIs Faculty**

**by**

**Air Force Research Directorates**

**July 31, 1996**

Supported by the Air Force Office of Scientific Research (AFOSR)  
Bolling AFB, D.C.

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<p>University of the District of Columbia 4200 Connecticut Ave., N.W. Washington, DC 20008</p> <p>Dr. Samuel Sullivan Assoc. Provost and Vice President for Academic Affairs Division of Research, Training, and International Programs (202) 274-5596 (202) 274-5241 (FAX) ssullivan@udcvm.bitnet</p>			<p>Dr. Joseph Chi</p> <p>Dr. Harry Morgan</p>	Dr. Jafar Vossoughi

## Armstrong Laboratory

Institution/Address Sponsored Program Administrator	Aerospace Medicine	Human Resources	Environics	Occupational & Environmental Health
Xavier University of Louisiana 7325 Palmetto Street, Box 66A New Orleans, LA 70125  Dr. Alden Reine Director, Office of Sponsored Programs  (504) 483-7575 Ext. 3499 (504) 486-2108 (FAX) areine@mail.xula.edu			Dr. Marcellus Dean  Dr. Howard Mielke	

## Phillips Laboratory

Institution/Address Sponsored Program Administrator	Advanced Weapons Survivability	Geophysics	Lasers & Imaging	Propulsion
<p>Delaware State University Cottage 504 1200 North Dupont Highway Dover, DE 19901</p> <p>Dr. Mildred Huff Ofosu Director, Office of Sponsored Programs (302) 739-3840 (302) 739-4294 (FAX) h.reed@dsu.edu</p>	Dr. Patrick Gleeson	Dr. Gabriel Gwamnesia	Dr. Nouredidine Melikechi	
<p>Dillard University 2601 Gentilly Boulevard New Orleans, LA 70122</p> <p>Dr. Clifford V. Johnson Vice President for Development (504) 286-4666 (504) 286-4890 (FAX) E mail: none</p>			Dr. Sylvanus Nwosu	

## Phillips Laboratory

Institution/Address Sponsored Program Administrator	Advanced Weapons Survivability	Geophysics	Lasers & Imaging	Propulsion
<p>Elizabeth City State University Campus Box 864 1704 Weeksville Road Elizabeth City, NC 27909</p> <p>Dr. James McLean Director, Office of Sponsored Programs, Contracts, and Grants (919) 335-3250 (919) 335-3542 (FAX) prjmclean@alpha.ecsu.edu</p>		Dr. Ravi Sinha		
<p>Morris Brown College 643 Martin Luther King, Jr. Drive, N.W. Atlanta, GA 30314</p> <p>Dr. Michael Ralph Director, Office of Sponsored Research (404) 220-0130 (404) 220-3700 (FAX) E mail: none</p>				Dr. Fred Okoh

# Phillips Laboratory

Institution/Address Sponsored Program Administrator	Advanced Weapons Survivability	Geophysics	Lasers & Imaging	Propulsion
<p>Texas A&amp;M University - Kingsville 230 College Hall Engineering Ave. at University Blvd. Kingsville, TX 78363</p> <p>Ms. Susan W. Sedwick Director, Office of Sponsored Research (512) 593-3344 (512) 593-3409 (FAX) ssedwick@tamuk.edu</p>				Dr. Robert Serth
<p>Texas Southern University 3100 Cleburne Houston, TX 77004</p> <p>Dr. Barbara Hayes Interim Dean Graduate School and Research Studies (713) 313-7233 or 7457 (713) 313-1876 (FAX) gra_hayes@tsu.edu</p>			Dr. Ravi Bhatnagar	

## Phillips Laboratory

Institution/Address Sponsored Program Administrator	Advanced Weapons Survivability	Geophysics	Lasers & Imaging	Propulsion
University of the District of Columbia 4200 Connecticut Ave., N.W. Washington, DC 20008  Dr. Samuel Sullivan Assoc. Provost and Vice President for Academic Affairs Division of Research, Training, and International Programs (202) 274-5596 (202) 274-5241 (FAX) ssullivan@udevm.bitnet		Dr. Harry Morgan		Dr. Aboise Adebayo
Virginia State University 20720-D 4th Ave. Petersburg, VA 23803  Ms. Yvonne Martin Coordinator, Office of Sponsored Programs (804) 524-5560 (804) 524-6518 (FAX) ymartin@vsu.edu			Dr. George Henderson	



# Rome Laboratory

Institution/Address Sponsored Program Administrator	Command, Control & Communications	Electromagnetics & Reliability	Intelligence & Reconnaissance	Surveillance & Photonics
<p>Delaware State University Cottage 504 1200 North Dupont Highway Dover, DE 19901</p> <p>Dr. Mildred Huff Ofosu Director, Office of Sponsored Programs (302) 739-3840 (302) 739-4294 (FAX) h.reed@dsu.edu</p>	Dr. Amos Olangunju			<p>Dr. H. Preston Hayward  Dr. Jimmie Smith</p>
<p>Dillard University 2601 Gentilly Boulevard New Orleans, LA 70122</p> <p>Dr. Clifford V. Johnson Vice President for Development  (504) 286-4666 (504) 286-4890 (FAX) E mail: none</p>				Dr. Sylvanus Nwosu

## Rome Laboratory

Institution/Address Sponsored Program Administrator	Command, Control & Communications	Electromagnetics & Reliability	Intelligence & Reconnaissance	Surveillance & Photonics
<p>Elizabeth City State University Campus Box 864 1704 Weeksville Road Elizabeth City, NC 27909</p> <p>Dr. James McLean Director, Office of Sponsored Programs, Contracts, and Grants (919) 335-3250 (919) 335-3542 (FAX) prjmclean@alpha.ecsu.edu</p>	<p>Dr. Linda Hayden</p>			
<p>Fisk University 1000 17th Avenue, North Nashville, TN 37208-3051</p> <p>Mr. George Carpenter Director, Office of Sponsored Programs (615) 329-8531 (615) 329-8711 (FAX) E mail: none</p>				<p>Dr. George Carpenter</p>

## Rome Laboratory

Institution/Address Sponsored Program Administrator	Command, Control & Communications	Electromagnetics & Reliability	Intelligence & Reconnaissance	Surveillance & Photonics
<p>Fort Valley State University 1005 State College Drive Fort Valley, GA 31030-3298</p> <p>Ms. Dorothy L.M. Crumbly Director, Office of Development and Title III</p> <p>(912) 825-6397 (912) 825-6461 (FAX) dcrumbly@fvs3.fvsc.peachnet.edu</p>	<p>Dr. Singli Garcia-Otero</p>			
<p>Grambling State University Adams Hall, Room 206 RWE Jones Drive Grambling, LA 71245</p> <p>Dr. Glenda Island Coordinator, Office of Grant Development</p> <p>(318) 274-3231 (318) 274-7373 (FAX) E mail: none</p>	<p>Dr. M. Balaram</p> <p>Dr. N. Gajendar</p> <p>Dr. Jamal Alsabbagh</p>		<p>Dr. M. Balaram</p> <p>Dr. Y.B. Reedy</p>	

## Rome Laboratory

Institution/Address Sponsored Program Administrator	Command, Control & Communications	Electromagnetics & Reliability	Intelligence & Reconnaissance	Surveillance & Photonics
<p>Morris Brown College 643 Martin Luther King, Jr. Drive, N.W. Atlanta, GA 30314</p> <p>Dr. Michael Ralph Director, Office of Sponsored Research</p> <p>(404) 220-0130 (404) 220-3700 (FAX) E mail: none</p>			Dr. John Trimble	Dr. Solomon Fessaha
<p>North Carolina Central University 160 Alexander Dunn Bldg 1801 Durham, NC 27707</p> <p>Dr. Benjamin F. Speller, Jr. Director, Office of Sponsored Research and Programs</p> <p>(919) 560-3333 (919) 560-5239 (FAX) E mail: none</p>				<p>Dr. Jyotsna Dutta</p> <p>Dr. Charles Jones</p>

## Rome Laboratory

Institution/Address Sponsored Program Administrator	Command, Control & Communications	Electromagnetics & Reliability	Intelligence & Reconnaissance	Surveillance & Photonics
<p>St. Augustine's College 1316 Oakwood Avenue Raleigh, NC 27611-2298</p> <p>Dr. Furney Brown Director, Governmental Affairs and Special Projects</p> <p>(919) 516-4278 (919) 516-4292 (FAX) E mail: none</p>		<p>Dr. Prodyot Dutt</p>		
<p>Texas A&amp;M University - Kingsville 230 College Hall Engineering Ave. at University Blvd. Kingsville, TX 78363</p> <p>Ms. Susan W. Sedwick Director, Office of Sponsored Research</p> <p>(512) 593-3344 (512) 593-3409 (FAX) ssedwick@tamuk.edu</p>			<p>Dr. Rajab Challoo Dr. Sung-won Park</p>	

## Rome Laboratory

Institution/Address Sponsored Program Administrator	Command, Control & Communications	Electromagnetics & Reliability	Intelligence & Reconnaissance	Surveillance & Photonics
<p>Tougaloo College 500 West County Line Road Tougaloo, MS 39174</p> <p>Dr. Asoka Spinivasan Professor, Biology Department (601) 977-7781 (601) 977-7739 (FAX) E mail: none</p>			Dr. Rajender Trehan	
<p>University of the District of Columbia 4200 Connecticut Ave., N.W. Washington, DC 20008</p> <p>Dr. Samuel Sullivan Assoc. Provost and Vice President for Academic Affairs Division of Research, Training, and International Programs (202) 274-5596 (202) 274-5241 (FAX) ssulliva@udcvm.bitnet</p>	<p>Dr. Farshad Amini  Dr. Omid Omidvar</p>		Dr. Farshad Amini	Dr. Behzad Ghavimi

## Rome Laboratory

Institution/Address Sponsored Program Administrator	Command, Control & Communications	Electromagnetics & Reliability	Intelligence & Reconnaissance	Surveillance & Photonics
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<p>Winston-Salem State University RJR Building, Room 17 601 Martin Luther King, Jr. Drive Winston Salem, NC 27110</p> <p>Dr. Gwendolyn Armstrong Director, Office of Sponsored Programs</p> <p>(910) 750-2130 (910) 750-2049 (FAX) armstrongg@wssu1.adp.wssu.edu</p>	<p>Dr. Richard Jou Dr. Fenglien Lee</p>			

# Wright Laboratory

Institution/Address Sponsored Program Administrator	Flight Dynamics	Materials	Solid State	Manufacturing Technology
<p>Delaware State University Cottage 504 1200 North Dupont Highway Dover, DE 19901</p> <p>Dr. Mildred Huff Ofosu Director, Office of Sponsored Programs (302) 739-3840 (302) 739-4294 (FAX) h.reed@dsu.edu</p>		<p>Dr. Patrick Gleeson Dr. Kraig Wheeler</p>	Dr. Arthur Purdy	
<p>Dillard University 2601 Gentilly Boulevard New Orleans, LA 70122</p> <p>Dr. Clifford V. Johnson Vice President for Development (504) 286-4666 (504) 286-4890 (FAX) E mail: none</p>		Dr. Sylvanus Nwosu		



# Wright Laboratory

Institution/Address Sponsored Program Administrator	Flight Dynamics	Materials	Solid State	Manufacturing Technology
<p>Elizabeth City State University Campus Box 864 1704 Weeksville Road Elizabeth City, NC 27909</p> <p>Dr. James McLean Director, Office of Sponsored Programs, Contracts, and Grants (919) 335-3250 (919) 335-3542 (FAX) prjmclean@alpha.ecsu.edu</p>			Dr. Sultana Ahmed Khan	
<p>Grambling State University Adams Hall, Room 206 RWE Jones Drive Grambling, LA 71245</p> <p>Dr. Glenda Island Coordinator, Office of Grant Development (318) 274-3231 (318) 274-7373 (FAX) E mail: none</p>		Dr. Jethro Terrel	Dr. A.N. Murty	

# Wright Laboratory

Institution/Address Sponsored Program Administrator	Flight Dynamics	Materials	Solid State	Manufacturing Technology
<p>Texas A&amp;M University - Kingsville 230 College Hall Engineering Ave. at University Blvd. Kingsville, TX 78363</p> <p>Ms. Susan W. Sedwick Director, Office of Sponsored Research</p> <p>(512) 593-3344 (512) 593-3409 (FAX) ssedwick@tamuk.edu</p>		Dr. Robert Serth		Dr. Robert McLaughlan
<p>University of the District of Columbia 4200 Connecticut Ave., N.W. Washington, DC 20008</p> <p>Dr. Samuel Sullivan Assoc. Provost and Vice President for Academic Affairs Division of Research, Training, and International Programs</p> <p>(202) 274-5596 (202) 274-5241 (FAX) ssullivan@udcvm.bitnet</p>		Dr. Inder Bhambri		

# Wright Laboratory

Institution/Address Sponsored Program Administrator	Flight Dynamics	Materials	Solid State	Manufacturing Technology
<p>Virginia State University 20720-D 4th Ave. Petersburg, VA 23803</p> <p>Ms. Yvonne Martin Coordinator, Office of Sponsored Programs</p> <p>(804) 524-5560 (804) 524-6518 (FAX) ymartin@vsu.edu</p>		Dr. David Noakes		

*Appendix - E*



"MEETING THE MINORITY CHALLENGE IN SCIENCE AND TECHNOLOGY:  
INSTITUTIONAL CAPACITY BUILDING FOR AIR FORCE RESEARCH"

U.S. AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
TECHNICAL ASSISTANCE TO HISTORICALLY BLACK COLLEGES AND  
UNIVERSITIES AND MINORITY INSTITUTIONS

FOLLOW-UP SURVEY

1. Prior to attending the videoconference were you acquainted with Air Force Materiel Command grant, contract, and institutional capacity building programs (fellowships for faculty and students)?

[ 5] Not Familiar    [ 4] Vaguely Familiar    [ 2] Well Acquainted    [ 0] Active Participant

2. Prior to attending the videoconference were you acquainted with Air Force Office of Scientific Research grant, contract, and institutional capacity building programs (fellowships for faculty and students)?

[ 4] Not Familiar    [ 5] Vaguely Familiar    [ 2] Well Acquainted    [ 0] Active Participant

3. Do you feel that the videoconference provided you with information you did not previously have regarding the Air Force Materiel Command's programs?

[11] Yes                      [ 0] No

The Air Force Office of Scientific Research's programs?

[11] Yes                      [ 0] No

4. To your Knowledge, did your institution receive the satellite transmissions on November 3rd and 4th for Parts I and II of the videoconference?

[ 4] Don't Know    [ 4] No                      [ 0] Part I only                      [ 0] Part II only                      [ 3] Both Parts

5. The first part of the videoconference addressed basic issues of how to develop a structured research program at HBCUs and MIs, including infrastructure development, identification of grant and contract opportunities, proposal writing, and grant and contract management.

Do you feel that your institution is in need of this kind of information and support, generally?

[10] Yes                      [ 1] No

- [ 6] Developing a Research Management Infrastructure (Office of Sponsored Research, Identifying a Responsible Individual for Management of the Research Function, Identifying Staff Support for Management of the Research Function, Developing a Financial Management System for Grants and Contracts, etc.)
- [ 7] Strengthening the Research Capacity (Identification of Capable Faculty to Perform Research, Providing State-of-the-Art Training for Faculty, Securing Expert Support for the Conduct of Research, etc.)
- [ 6] Identification of Grant and Contract Opportunities (Marketing of the Institution, Developing a Datafile of Grant and Contract Opportunities, Securing Subscriptions to Grant and Contract Announcement Periodicals, Amassing Publications Regarding Grant and Contract Opportunities, etc.)
- [ 9] Networking Within the Air Force Infrastructure (Identifying Specific Air Force Research Needs, Maintaining On-going Working Relationships with Air Force Programs, etc.)
- [ 7] Proposal Writing (Structuring Proposals, Conceptualizing Ideas for Fundable Proposals, Editing Proposals, etc.)
- [ 5] Grant and Contract Management (Meeting Grant and Contract Obligations, Adhering to Legal and Regulatory Requirements, Managing Fiscal Reporting Requirements, Abiding by Cost Principles and Allowable, etc.)

[ 6] Yes [ 5] No

[ 4] Self-initiated                      [ 2] Air Force-initiated

7. Does your institution have science and/or engineering programs at the Bachelor and above levels?

E - 2

9. Has your institution performed grant or contract work for the Air Force or Department of Defense?

[ 6 ] Yes

[ 4 ] No

[ 1 ] No Response

If Yes, please describe the kinds of projects for which you have been funded? Biomedical Research, Environmental Research, General Engineering, Computer Science, Physics, Plasma Research, Parallel Processing.

10. What are your institution's greatest needs in its attempts to increase sponsored programs in science and technology?

Identification of mutual match between current Air Force research needs and the kind of research undertaken by the institutions. The overview of what the laboratories do was very important and informative. We need more of that kind of interfacing. Funds are needed to enhance institutional research capability. The institutions require infrastructure and start-up capital. The institutions need to be made continually aware of research opportunities. We need financial assistance for minority students pursuing majors in these fields. The institutions need technical assistance in developing their science, engineering, and computer technology programs. Funds are also needed to support faculty release time.

11. What do you feel the Air Force can do to assist your institution in becoming more competitive with respect to scientific and technological research?

The institutions require that grant and contract opportunities allow for faculty release time and summer salary. Some programs will not support three-quarters or more faculty release time. We need the Air Force to make every effort to alert us to research opportunities (i.e., special seminars, direct contact with institutional faculty, etc.) Infrastructure development support is what we need. We would like to see the Air Force involved in K-12 educational pipeline projects. We require assistance with faculty development. We need computing and scientific equipment. Also we need financial support for our students.

#### RESPONDENTS

California State University - Dominguez Hills  
City College of New York  
Delaware State University  
Elizabeth City State University  
Florida International University  
Knoxville College  
Morgan State University  
Texas A&M International University, Lariat  
Texas Southern University  
University of Puerto Rico - Rio Piedra Campus  
Virginia State University

*Appendix - F*





"MEETING THE MINORITY CHALLENGE IN SCIENCE AND  
TECHNOLOGY: INSTITUTIONAL CAPACITY BUILDING FOR AIR  
FORCE RESEARCH"

U.S. AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
TECHNICAL ASSISTANCE TO HISTORICALLY BLACK COLLEGES AND UNIVERSITIES  
AND MINORITY INSTITUTIONS

**FOLLOW-UP SURVEY**

2. Does your institution have a formal sponsored research office? [24] Yes [ 6] No

**The six institutions indicating they did not have a formal office include: Barry University, Dillard University, Fort Valley State University, Johnson C. Smith University, Tougaloo College, and Texas A & M International University.**

3. Prior to viewing these videotapes, how familiar would you say faculty at your institution were with grant, contract, and institutional capacity building programs (fellowships for faculty and students) sponsored by the Air Force?

[ 6] Unfamiliar [19] Vaguely Familiar [ 3] Very Familiar [ 2] Active Participant

**Those institutions indicating that they were very familiar with Air Force grant, contract, and fellowship programs include: Fayetteville State University, Fort Valley State University, and Elizabeth City State University. In addition, Delaware State and Elizabeth City State indicated that while some of their faculty were Active Participants in Air Force programs, others were either only Vaguely Familiar (40% - Elizabeth City State; 90% - Delaware State), Very Familiar (30% - Elizabeth City State), or Active (10% - Delaware State; 30% Elizabeth City State).**

4. One issue addressed in the videotapes is how to develop a structured research program. This includes infrastructure development, identification of grant and contract opportunities, proposal writing, and grant and contract management.

Do you feel that your institution needs additional information in one or more of these areas?

[28] Yes [ 2] No

**The two indicating that their institutions required no additional information were: Mississippi Valley State and West Virginia State.**

If yes, which of the following topics represent key areas of need for your institution?

- [12] Developing a Research Management Infrastructure (Office of Sponsored Research, Identifying a Responsible Individual for Management of the Research Function,

Identifying Staff Support for Management of the Research Function, Developing a Financial Management System for Grants and Contracts, etc.)

- [20] Strengthening the Research Capacity (Identification of Capable Faculty to Perform Research, Providing State-of-the-Art Training for Faculty, Securing Expert Support for the Conduct of Research, etc.)
- [22] Identification of Grant and Contract Opportunities (Marketing of the Institution, Developing a File of Grant and Contract Opportunities, Securing Subscriptions to Grant and Contract Announcement Periodicals, Amassing Publications Regarding Grant and Contract Opportunities, etc.)
- [22] Networking Within the **Air Force** Infrastructure (Identifying Specific **Air Force** Research Needs, Maintaining On-going Working Relationships with **Air Force** Programs, etc.)
- [18] Proposal Writing (Structuring Proposals, Conceptualizing Ideas for Fundable Proposals, Editing Proposals, etc.)
- [17] Grant and Contract Management (Meeting Grant and Contract Obligations, Adhering to Legal and Regulatory Requirements, Managing Fiscal Reporting Requirements, Abiding by Cost Principles and Allowable, etc.)

5. Please list the names and telephone numbers for persons at your institution who have performed grant or contract work for the **Air Force**?

**Nineteen (19) institutions indicated that no faculty or staff members have performed contract work for the Air Force. Four (4) institutions indicated that one faculty had performed such work. Two (2) indicated that four faculty had worked on Air Force projects. Two (2) institutions were unsure if it has had any Air Force work.**

6. What are your institution's greatest needs in its attempts to increase sponsored programs in science and technology?

**Eleven (11) of the institutions identified a need for increased administrative capacity (i.e., more staff specifically focused on faculty research support). Twelve (12) indicated a need to re-tool and strengthen research capacity, including training for faculty and students. They expressed a need for state-of-the-art equipment and laboratories, including provisions for distance learning and interactive instructional devices. Seven (7) indicated a need for matching faculty expertise to research opportunities that incorporate the instruction of students. The remaining institutions varied in their expressions of need to include: a) increased campus resources for faculty research; b) release time for faculty; c) a formal office of sponsored research; d) publicity about the institution, its viability and capabilities; e) long term commitments to research in concert with the institution's mission; f) incentives for principal investigators; g) more focused approach to research; and h) opportunities for students.**

7. What do you feel the **Air Force** can do to assist your institution in becoming more competitive with respect to scientific and technological research?

**The institutions offered a variety of ideas about what assistance they would like the Air Force to provide. These include:**

- o Air Force consultancy with respect to curriculum development/modification.**
- o Establishment of a sponsored research office in the science division, including systematic training.**
- o Provide early and frequent notification about upcoming opportunities.**
- o Provide alerts to the Federal Register and the Commerce Business Daily.**
- o Send Requests for Proposals electronically.**
- o Intensive hands-on technical assistance for planning and preparation of responses.**
- o Consultations with program officers.**
- o Access to samples of past successful proposals and programs.**
- o Possible collaborations with other institutions and contractors.**
- o Identification of sources to approach for resource donations.**
- o Conduct workshops and meetings for interested faculty and grants office staff.**
- o Visits to the institutions to assess what is needed from the Air Force's perspective.**
- o Preview proposals and feedback before submission.**
- o Provide summer pay opportunities for the retraining of faculty.**
- o Conduct technical workshops on campus.**
- o Employ HBCU/MI faculty to work in Air Force research on-site.**
- o Establish funded programs in Avionics, Electronics, and Manufacturing Technology.**
- o Provide speakers for faculty, staff, and students.**
- o Provide funding for high ticket equipment.**
- o Provide training in responding to contract cost proposal requirements.**

- o Initiate intergovernmental personnel actions for near retirement Air Force personnel and place them on HBCU campuses.**
- o Continue financial support to small undergraduate programs.**
- o Identify specific guidelines for proposal development.**
- o Clearly state research needs and objectives.**
- o Develop short-term internships.**
- o Provide scholarships for advanced degrees.**
- o Provide on-site training in Air Force procurement procedures.**

*Appendix - G*

**UDC AFOSR  
TECHNICAL ASSISTANCE  
CENTER**

*Database of HBCU/MI Capabilities*

*Advice and Counsel in Management  
of Sponsored Research*

*Guidance in the Research Solicitation  
Process*

*Assistance in Proposal Development*

*Explanation of Grant and Contract Procedures*

*Identification of Expert Research Support*

*Facilitation of Faculty and Student  
Capacity Building through  
Fellowships and Internships*

**1-800-259-7250**

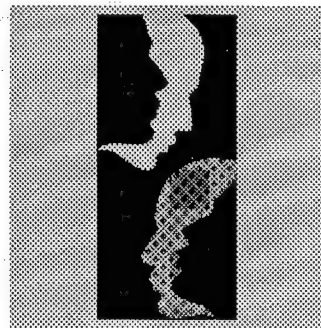


Conducted by  
the  
University of the District of Columbia  
under contract with the  
Air Force Office of Scientific Research  
Bolling AFB, DC

**THE  
UNIVERSITY  
OF THE  
DISTRICT OF COLUMBIA**

*presents*

**"MEETING  
THE MINORITY CHALLENGE  
IN  
SCIENCE AND TECHNOLOGY:  
INSTITUTIONAL  
CAPACITY BUILDING  
FOR AIR FORCE RESEARCH"**



*A Project of  
Technical Assistance  
to  
Historically Black Colleges and Universities  
and  
Minority Institutions*

**Supported by the  
Air Force Office of Scientific Research  
(AFOSR)  
Bolling AFB, D.C.**

## PROJECT OVERVIEW

The Air Force Office of Scientific Research (AFOSR) has contracted with the University of the District of Columbia (UDC) to provide Technical Assistance to Historically Black Colleges and Universities (HBCUs) and Minority Institutions (MIs) to enhance their ability to compete successfully for Air Force basic and applied research grants and contracts. The Technical Assistance to be provided includes assistance in structuring formal sponsored research programs, assistance in proposal development, identification of expert support for proposed projects, guidance in grant and contract management, and development of a database of HBCU/MI capabilities. The Technical Assistance effort also seeks to provide counseling and advice to HBCUs and MIs that will facilitate their adherence to related technical performance, administrative, and Federal regulatory requirements.

On **November 3, 1994**, UDC will present the first of a two-part videoconference, with technical information regarding the challenges confronting HBCUs/MIs in the establishment and management of sponsored research, proposal development, and grant and contract management. At that time, detailed information will be provided regarding follow-on technical assistance available through a formal **UDC AFOSR Technical Assistance Center**.

To augment these efforts on **November 4, 1994**, AFOSR will present the second phase of the videoconference, to introduce HBCU/MI institutions to the research and capability enhancement support programs of AFOSR, and to discuss with the HBCU/MI community, problems and obstacles that inhibit their participation in AFOSR-supported research programs.

The UDC AFOSR Technical Assistance Center is available from 9:00 a.m. until 5:00 p.m., Monday through Friday, by toll-free number - **1-800-259-7250**.

## ANNOUNCING

### TECHNICAL ASSISTANCE VIDEOCONFERENCES

(Downlinked to your institution or to a nearby site.)

#### PART I

**Thursday, November 3, 1994**

**1:00 p.m. - 4:00 p.m. EST**

- O EFFECTIVE SPONSORED RESEARCH  
INFRASTRUCTURE*
- O SEARCHING FOR RESEARCH OPPORTUNITIES*
- O MECHANISMS FOR ENHANCING RESEARCH  
CAPABILITIES*
- O PROPOSAL DEVELOPMENT*
- O GRANT AND CONTRACT MANAGEMENT*
- O LIVE CALL-IN INQUIRY AND RESPONSE*

Developed and produced by  
the University of the District of Columbia.

#### PART II

**Friday, November 4, 1994**

**10:00 a.m. - 5:00 p.m. EST**

HOSTED BY  
**BRIGADIER GENERAL RICHARD R. PAUL  
DIRECTOR FOR SCIENCE AND TECHNOLOGY  
AIR FORCE MATERIEL COMMAND**

- O LIVE, CALL-IN INTERACTION WITH AIR FORCE  
MATERIEL COMMAND RESEARCH ADMINISTRATORS*
- O RESEARCH THRUSTS OF AIR FORCE LABORATORIES*
- O AFOSR RESEARCH THRUSTS*
- O PANEL OF HBCU AND MI PRESIDENTS*

Developed by AFOSR with assistance from  
the University of the District of Columbia.

*Appendix - H*



# UNIVERSITY OF THE DISTRICT OF COLUMBIA



## "Meeting the Minority Challenge in Science and Technology: Institutional Capacity Building for Air Force Research"

### ROME LABORATORY CONFERENCE AND TOUR

October 16, 17 and 18, 1995

### ***PARTICIPANTS***

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*Appendix - I*



"Meeting the Minority Challenge in Science and Technology:  
Institutional Capacity Building for Air Force Research"

***Program***

*Rome Laboratory Conference and Tour*

*coordinated by*

*The University of the District of Columbia*

*and*

*Southern University and A&M College*

*October 16, 17 and 18, 1995*

*Rome, New York*

Supported by the  
Air Force Office of Scientific Research  
(AFOSR)  
Bolling AFB, D.C.

## ***Program***

### **OCTOBER 16, 1995**

3:00 - 6:00 p.m.      Check-in and Registration  
Paul Revere Lodge

6:30 - 8:00 p.m.      Orientation Dinner Meeting  
The Beeches

### **OCTOBER 17, 1995**

6:30 - 7:35 a.m.      Breakfast  
Paul Revere Lodge

7:40 a.m.              Depart Lodge for Rome Laboratory

8:00 - 8:05 a.m.      Conference Overview  
Dr. Rose Glee  
Dr. Samuel Sullivan  
Project Directors

8:05 - 8:10 a.m.      Remarks  
Dr. Harold Weinstock  
Program Manager

8:10 - 8:15 a.m.      Welcome to Rome Laboratory  
Col. Ted Bowlds  
Commander

8:15 - 8:35 a.m.      The Worldwide Web  
Mr. Scott Gregory  
Web Master

8:35 - 8:45 a.m.      Palace Knight Program  
Ms. Anne Taylor  
Chief of Education and Training

Overview of Directorates

8:45 - 9:00 a.m.      Command, Control  
and Communications (C3)  
Col. Charles O. Cornell  
Deputy Director

9:00 - 9:15 a.m.      Electromagnetics  
and Reliability (ER)  
Col. F. Brendel Kreighbaum  
Director of Reliability

9:15 - 9:30 a.m.      Intelligence and Reconnaissance (IR)  
Col. Del Atkinson  
Director

9:30 - 9:45 a.m.      Surveillance and Photonics (OC)  
Maj. Gary Barmore  
Deputy Director



9:45 - 10:00 a.m.	Break	
	Tour of Rome Laboratory Facilities	
10:00 - 10:45 a.m.	Group 1 - Command, Control and Communications (C3)	Col. Charles O. Cornell
	Group 2 - Electromagnetics and Reliability (ER)	Mr. John J. Bart Chief Scientist for Reliability
11:00 - 11:45 a.m.	Group 2 - Command, Control and Communications (C3)	Col. Charles O. Cornell
	Group 1 - Electromagnetics and Reliability (ER)	Mr. John J. Bart
11:50 a.m.	Depart Rome Laboratory for The Beeches	
12:00 - 2:00 p.m.	Lunch at The Beeches	
2:15 p.m.	Depart The Beeches for Rome Laboratory	
	Tour of Rome Laboratory Facilities Continued	
2:30 - 3:15 p.m.	Group 1 - Surveillance and Photonics (OC)	Mr. James W. Cusack Division Head for Photonics and Mr. Jerry Genello
	Group 2 - Intelligence and Reconnaissance (IR)	Ms. Maria Amodio
3:30 - 4:15 p.m.	Group 2 - Surveillance and Photonics (OC)	Mr. James W. Cusack Mr. Jerry Genello
	Group 1 - Intelligence and Reconnaissance (IR)	Ms. Maria Amodio
4:25 p.m.	Depart Rome Laboratory for the Lodge	
6:30 p.m.	Dinner at The Beeches	

**OCTOBER 18, 1995**

6:30 - 7:35 a.m.	Breakfast Paul Revere Lodge
6:30 - 7:40 a.m.	Lodge Check-out

7:40 a.m.	Depart Lodge for Rome Laboratory	
	Detailed Research Interests: Concurrent Mini-Sessions and Roundtable Discussions	
8:00 - 9:10 a.m.	Group A	
	* Artificial Intelligence Technology (C3)	Mr. Donald Roberts Mr. Craig Anken Mr. Douglas White
	* Electronic Reliability (ERG)	Mr. John J. Bart
	* Speech Processing (IR)	Mr. Steve Smith
9:15 - 10:25 a.m.	Group B	
	* Communications Networks (C3)	Mr. Joseph Zdanowicz Mr. Dan Hague
	* Electromagnetic Materials (ERH) (Teleconference)	Dr. John T. Schott
	* Optical Neural Networks (OC)	Capt. Robert P. MacDonald Mr. Wesley Foor
10:30 - 11:40 a.m.	Group C	
	* Space Communications (C3)	Mr. Thomas Blake Mr. Brian Spink Mr. William Cook
	* Imagery Exploitation (IR)	Mr. Jerry Nethercott
	* Electromagnetic Technology (ERG)	Mr. Michael Seifert
11:45 - 11:55	Closing Remarks	Dr. Darryl Greenwood Chief Scientist
Noon	Depart Rome Laboratory for The Beeches	
12:15 p.m.	Lunch at The Beeches	
1:00 p.m.	Depart The Beeches for Syracuse Airport	

**OCTOBER 17, 1995**

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Dr. Murty A. Akundi	Dr. Mary Ann Jungbauer	Dr. Nicholas J. Pinto
Dr. Hendrik Angad-Gaur	Dr. Samuel Lakeou	Dr. Mark Purtill
Dr. H. John Caulfield	Dr. Reginald Lindsey	Dr. Carey E. Stronach
Dr. Warren E. Collins	Dr. Nouredine Melikechi	Dr. Daniel Suson
Dr. Maria Dunn	Dr. Harry Morgan	Dr. John Trimble
Dr. Rose Glee	Dr. Seetala V. Naidu	Dr. Kraig A. Wheeler
Dr. Juan H. Hinojosa	Dr. Amos O. Olagunju	
Dr. Richard S. Jou	Dr. Joe Omojola	

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Dr. Gerald V. Bruno	Dr. Booker Juma	Dr. Brajendra N. Panda
Dr. John K. Coleman	Dr. Edmond B. Koker	Dr. Robert Serth
Dr. Oscar H. Criner	Dr. Fenglien Lee	Dr. Samuel Sullivan
Dr. Gary L. Duerksen	Dr. Antonio Martinez	Dr. Larry K. Sveum
Dr. Matthew Edwards	Dr. Steven H. Morgan	Dr. Rajender Trehan
Dr. Singli Garcia-Otero	Dr. A.N. Murty	Dr. Raymond Williams
Dr. Merritt Helvenston	Dr. David R. Noakes	

***Detailed Research Interests: Concurrent Mini-Sessions and Roundtable Discussions***

**SUMMARY OF CHOICES**

**for**

**OCTOBER 18, 1995**

		<b>#1</b>	<b>#2</b>
8:00 - 9:10 a.m.	Group A		
	* Artificial Intelligence Technology (C3)	[   ]	[   ]
	* Electronic Reliability (ERG)	[   ]	[   ]
	* Speech Processing (IR)	[   ]	[   ]
9:15 - 10:25 a.m.	Group B		
	* Communications Networks (C3)	[   ]	[   ]
	* Electromagnetic Materials (ERH) (Teleconference)	[   ]	[   ]
	* Optical Neural Networks (OC)	[   ]	[   ]
10:30 - 11:40 a.m.	Group C		
	* Space Communications (C3)	[   ]	[   ]
	* Imagery Exploitation (IR)	[   ]	[   ]
	* Electromagnetic Technology (ERG)	[   ]	[   ]

*Appendix - J*



"MEETING THE MINORITY CHALLENGE IN SCIENCE AND  
TECHNOLOGY: INSTITUTIONAL CAPACITY BUILDING FOR  
AIR FORCE RESEARCH"

U.S. AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
TECHNICAL ASSISTANCE TO HISTORICALLY BLACK COLLEGES AND UNIVERSITIES  
AND MINORITY INSTITUTIONS

ROME TOUR PARTICIPANT SURVEY

2. Does your institution have a formal sponsored research office? [34] Yes [ 4] No

**Although four faculty researchers indicated that they did not have a formal sponsored research office, one of these institutions actually does have a formal office. One faculty researcher from another institution indicated that he did not know whether or not there was a formal sponsored research office.**

3. How familiar would you say faculty at your institution are with grant, contract, and institutional capacity building programs (fellowships for faculty and students) sponsored by the **Air Force**?

[ 7] Unfamiliar [25] Vaguely Familiar [ 6] Very Familiar [ 1] Active Participant

**Faculty researchers indicating that their institutions were very familiar with Air Force opportunities include: Fisk, New Mexico Highlands, Dillard, Alabama A & M, and University of Puerto Rico at Humacao. The two indicating that they were active participants were from Texas A & M at Kingsville.**

4. Do you feel that your institution is in need of additional information in one or more of these areas in order to effectively improve its structured research program? This includes infrastructure development, identification of grant and contract opportunities, proposal writing, and grant and contract management.

[39] Yes [ 0] No

If yes, which of the following topics represent key areas of need for your institution?

[ 8] Developing a Research Management Infrastructure (Office of Sponsored Research, Identifying a Responsible Individual for Management of the Research Function, Identifying Staff Support for Management of the Research Function, Developing a Financial Management System for Grants and Contracts, etc.)

[31] Strengthening the Research Capacity (Identification of Capable Faculty to Perform

Research, Providing State-of-the-Art Training for Faculty, Securing Expert Support for the Conduct of Research, etc.)

- [24] Identification of Grant and Contract Opportunities (Marketing of the Institution, Developing a File of Grant and Contract Opportunities, Securing Subscriptions to Grant and Contract Announcement Periodicals, Amassing Publications Regarding Grant and Contract Opportunities, etc.)
- [32] Networking Within the **Air Force** Infrastructure (Identifying Specific **Air Force** Research Needs, Maintaining On-going Working Relationships with **Air Force** Programs, etc.)
- [24] Proposal Writing (Structuring Proposals, Conceptualizing Ideas for Fundable Proposals, Editing Proposals, etc.)
- [14] Grant and Contract Management (Meeting Grant and Contract Obligations, Adhering to Legal and Regulatory Requirements, Managing Fiscal Reporting Requirements, Abiding by Cost Principles and Allowable, etc.)

5. What are your institution's greatest needs in its attempts to increase sponsored programs in science and technology?

**A variety of needs were identified, including:**

- o Improve the research infrastructure.**
- o Encourage more faculty participation by reducing teaching loads and giving financial encouragement to faculty members with research grants.**
- o Match faculty expertise with sponsored programs.**
- o Hire more faculty so that other faculty can have release time to pursue proposals.**
- o State-of-the-art instrumentation.**
- o Graduate programs in science and mathematics.**
- o Acquisition of research faculty who can obtain funding to support graduate programs.**
- o A formal sponsored research office.**
- o Funds for equipment in the area of material characterization.**
- o Financial support for students to be exposed to research at the undergraduate level.**

- o Convincing the administration that research should be given a high priority.**
- o Networking with key people in the Air Force.**
- o Funds for scientific journal subscriptions and research associate personnel.**
- o Cluster research teaming.**
- o Provide seed money for new faculty researchers.**
- o More faculty in science, engineering, and mathematics.**
- o Provide forums for faculty skills utilization.**
- o Strengthen the research capacity of science faculty.**
- o Motivate faculty to write proposals.**
- o Institutional policy for directing indirect cost dollars back into research.**
- o Providing maintenance funding for infrastructure to support research.**
- o Improvement in library, computers, and laboratories.**
- o Institutional support areas need improvement (i.e., procurement, administrative services, etc.)**

**7. What do you feel the Air Force can do to assist your institution in becoming more competitive with respect to scientific and technological research?**

**The institutions offered a variety of ideas about what assistance they would like the Air Force to provide. These include:**

- o Support for faculty research through grants and contracts.**
- o Summer programs for faculty and students.**
- o Set up seminars for HBCU top administrators to explain the benefits that Air Force funding can provide to their campuses.**
- o Help develop a research program of interest to the Air Force wherein top-line experts so that we can develop a critical mass of excellence in the field.**
- o Provide on-campus seminars on Air Force opportunities.**
- o Identify small projects within the capabilities of HBCU institutions.**



- o Establish contacts between lab researchers and university professors.**
- o Summer faculty fellowships and followup grants.**
- o More conversations with Air Force scientists on research needs.**
- o Assist in equipment purchase.**
- o Help administrators and policy makers at HBCU and MI institutions understand the significance and importance of research.**
- o Most military areas are tightly focused. Faculty do not see how they fit in. The Air Force/military needs to identify more broad, basic opportunities for research.**
- o Develop faculty on loan programs.**
- o Help establish partnerships/cooperative arrangements with laboratories.**
- o Provide research training opportunities for faculty.**
- o Help develop collective research efforts between major HBCUs with graduate/research programs and smaller HBCUs.**
- o On-going communications with HBCUs.**
- o Provide summer internships for students and faculty.**
- o Provide seed monies or initiation grants to faculty.**
- o Establish research and equipment grants.**
- o Provide faculty enhancement and exchange programs.**
- o Help develop ways and means of establishing research programs.**
- o Liaison with key research faculty.**
- o Make easily available unclassified documents detailing specific research accomplishments in Air Force research.**
- o Donate equipment and/or fund on-going programs.**
- o Participate in our long-range research program.**
- o Provide surplus equipment.**

- o Include HBCU/MI institutions on a routine mailing list or E-mail transmission.**
- o Provide technical assistance in the area of proposal development for research related to the Air Force.**

**7. Comments.**

**Comments provided by the group tended to emphasize the importance and significance of the Rome Laboratory tour and conference. The majority felt that this was an important step toward providing a forum for intimate knowledge about specific laboratory needs. Several stressed that on-going follow up is important. They stressed the importance of being allowed to talk directly with scientists of the Air Force. Some praised UDC and the Air Force for conceiving of the conference and tour, and further indicated a need for developing collaborative projects between and among the HBCUs and MIs. Respondents would like to see similar communication of detailed research interest areas from other Air Force organizations, either in writing or in forums. Others indicated that they hoped the remaining Air Force laboratories would follow suit.**

*Appendix - K*



MEETING THE MINORITY CHALLENGE IN SCIENCE AND TECHNOLOGY:  
INSTITUTIONAL CAPACITY BUILDING  
FOR AIR FORCE RESEARCH

***EVALUATION FORM***

ROME LABORATORY CONFERENCE AND TOUR

October 16, 17, and 18, 1995

Rome, New York

Fields of Interest:

Alarm System Design, False Alarms, Virtual Reality  
Artificial Intelligence, Software Engineering, and Statistics  
Applied Physics and Environmental Science  
Applied High Temperature Superconductivity  
Chemical Engineering, Data Reconciliation and Gross Error Detection  
Chemistry (Nonlinear Optical Properties Calculation)  
Computational Physics - Detector Simulation  
Computer Science (Parallel Processing, Image Processing, Computational  
Geometry, Numerical Analysis)  
Condensed Matter and Solid State Physics  
Database Systems, Multimedia Systems  
Digital Signal Processing, Image Processing, Natural Network  
Environmental Chemistry  
Experimental Condensed Matter  
Geophysics  
Material Science  
Mathematics and Computer Science (2)  
Molecular Orbital Calculations (sigma and pi electron interactions on alpha-diketones)  
Nonlinear Optics - Laser Spectroscopy - Lasers & Laser Amplifiers  
NMR-NQR-Magnetization: Solid State Physics/Material Science  
Optics  
Parallel Computing, Numerical Computation  
Photochemistry  
Photorefractive Materials  
Physical Chemistry, Surface Science  
Physics (Condensed Matter)  
Physics, Material Research  
Polymer and Inorganic Chemistry  
Solid State Physics, Superconductivity  
Spectroscopy, Atomic and Molecular Physics

1. Did you make contacts with Rome scientists that you intend to follow-up? [24] Yes [16] No
2. Will you pursue submitting a "white paper" to at least one contact that you made?  
[26] Yes [14] No [2] Unsure
3. How were the mini-session discussions on specific research areas useful to you?

Responses were are follows:

- o Expanded my awareness of what was being done.
- o Gave me insight into future possibilities.
- o Provided insight on Rome Laboratory's artificial intelligence applications in image processing, speech processing, signal processing, aircraft and resource scheduling, etc.
- o They allowed me to see where and how I can contribute to the research being done at Rome.
- o Provided me ideas. However, would have liked to have gotten an idea of research methods.
- o More aware of specific areas that use basic sciences - chemistry and physics.
- o Discussion on how to submit a "white paper," and how to get involved with lab scientists.
- o Not useful to me (research not in my specific area) - (5)
- o Opportunities to contact Rome scientists and collaborate with other HBCUs.
- o Discussions needed to be more two-way. Also needed more information on relevant projects to which HBCU/Mi contributions can be made.
- o Wished there was time for presenting HBCU/Mi capabilities and on-going research to the scientists.
- o Discovered that the Air Force labs are phasing out research on high temperature superconductivity.
- o The few I was interested in were too short.
- o Put me in contact with the Rome Lab scientists with whom I share specific research interests.

- o They surely were useful. I work in the area of high performance numerical computations. Although there were no talks specifically in my area, I will call to find out more.
- o I got the opportunity to meet with five individual technical people one-on-one.
- o Allowed time for questions and answers and one-on-one meetings with lab researchers.
- o Helped focus on those directorates that might be useful.
- o Provided information on knowledge-based software.

4. In what ways was the tour of Rome Laboratory useful to you?

Faculty researchers responded as follows (where respondents provides similar answers, only one summary response appears):

- o Saw equipment and experiments new to me, especially in optics and in virtual reality. Met specific scientist and discussed my interests in theoretical NLO. Met interesting colleagues and plan collaborations with some of them.
- o Opened opportunities for me and my faculty members to engage in summer research and/or funded research.
- o Gave me a unique opportunity to talk to some scientists and discuss possibilities of research.
- o Gave me ideas to do research on.
- o Made me aware of other laboratories that perform research in biosciences.
- o Provided me information that I will pass on to other faculty on my campus regarding software engineering.
- o Found some match with Rome's work in Computer Science and Mathematics for other faculty on my campus.
- o Became aware of research focus.
- o Helped me understand better the research and development culture of the U.S. Air Force.
- o Provided very good interaction with other faculty from similar institutions. I now have a good feel for the opportunities for research available at Rome Laboratory.
- o Introduced the idea of electromigration failure research.

- o Learned about research areas of mutual interest and about the AFOSR.
  - o Making contacts and networking.
  - o I am now able to provide better advice to students at my institution in terms of preparation (electives) for the workforce.
  - o Very interesting to learn of advances in communications technology.
  - o Educational and inspirational.
  - o Saw the importance of surface science and materials in Air Force research and opportunity for me in summer participation.
  - o Most useful with regard to general information regarding AFOSR and Hanscom, AFB.
5. Are you now more familiar with AFOSR Summer Research Programs? [38] Yes [2] No
6. Would you consider a summer research opportunity at Rome Laboratory?  
[26] Yes [13] No [1] Not Yet
7. Do you feel there are realistic grant/contract opportunities at Rome Laboratory in areas that are within your fields of interest?  
[23] Yes [15] No [1] Possibly [1] At Another Lab [1] No Response
8. What overall rating would you give the Rome Laboratory Conference and Tour?  
[23] Excellent [1] Very Good [15] Good [ 1] Marginal [ ] Poor

ADDITIONAL COMMENTS:

- o I would like to thank you for the efforts and the hard work in organizing the meeting at Rome laboratory last week. I sincerely hope that we will be able to build up a cooperation - a working relationship - between Rome laboratory and our respective institution. For my part, I intend to follow up as soon as possible. I am hopeful that my research and my expertise can be of some help to Rome laboratory. - Dr. N. Melikechi, Delaware State University
- o Thanks for giving me an opportunity to visit the Rome lab and develop some contact. Hope to hear from you again about any similar opportunities. Since I am not a U.S. citizen, I may not be eligible. - Dr. B. Panda, Alabama A&M University
- o The best aspect was making good contacts with other HBCU scientists. - Dr. J. Caulfield, Alabama A&M University

*Appendix - L*



# UNIVERSITY OF THE DISTRICT OF COLUMBIA



"Meeting the Minority Challenge in Science and Technology:  
Institutional Capacity Building for Air Force Research"

SPONSORED PROGRAM  
WORKSHOPS AT NORTH CAROLINA A&T STATE UNIVERSITY

October 24 and 25, 1995

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*Appendix - M*



"Meeting the Minority Challenge in Science and Technology:  
Institutional Capacity Building for Air Force Research"

***Workshop Program***

*"Infrastructure Building for Effective Sponsored Program Operations"*

*coordinated by*

*The University of the District of Columbia*

*and*

*Southern University and A&M College*

*October 24 and 25, 1995*

*North Carolina A&T State University  
Greensboro, North Carolina*

Supported by the  
Air Force Office of Scientific Research  
(AFOSR)  
Bolling AFB, D.C.

## ***Workshop Program***

### **OCTOBER 24, 1995**

3:00 - 5:45 p.m.      Hotel Check-in and Registration  
Greensboro Hilton

6:00 - 8:30 p.m.      Orientation Dinner Meeting  
Triad East - Greensboro Hilton

### **OCTOBER 25, 1995**

7:00 - 8:00 a.m.      Breakfast  
Greensboro Hilton

Check-out

8:10 a.m.              Depart for North Carolina A&T State University  
Webb Hall Auditorium

8:30 - 8:40 a.m.	Welcome	Dr. Edward B. Fort, Chancellor North Carolina A&T State University
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8:40 - 8:50 a.m.	Workshop Overview	Dr. Rose Glee, Project Director Southern University and A&M College
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8:50 - 9:00 a.m.	Remarks	Dr. Harold Weinstock, Program Manager Air Force Office of Scientific Research
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9:00 - 9:10 a.m.	Sponsored Program Issues at HBCUs and MIs	Dr. Samuel Sullivan, Project Director University of the District of Columbia
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9:10 - 9:55 a.m.	Experience Sharing	Participants
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10:00 - 10:30 a.m.	Tour of Sponsored Research Offices Division of Research Dowdy Administration Building	Ms. Mary Atkinson Director of Sponsored Programs North Carolina A&T State University
	* Tour Group 1	
10:40 - 11:55 a.m.	An Effective Sponsored Research Program	Dr. Earnestine Psalmonds Vice Chancellor for Research North Carolina A&T State University
	* Infrastructure and Pre-award Issues	
	Question and Answer Period	
12:00 - 1:15 p.m.	Lunch	
1:30 - 2:30 p.m.	An Effective Sponsored Research Program	Dr. Earnestine Psalmonds
	* Post-award Issues	
	Question and Answer Period	
2:40 - 3:10 p.m.	Tour of Sponsored Research Offices	Ms. Mary Atkinson
	* Tour Group 2	
3:15 - 3:25 p.m.	Wrap-up	
3:30 p.m.	Departures to Greensboro Airport	



***TOUR ASSIGNMENTS - Group 1***

Mr. Thomas E. Crittenden	Dr. Glenda Island	Dr. Herbert C. Smitherman
Ms. Dorothy L.M. Crumbly	Ms. Dianne Kirnes	Dr. Asoka Srinivasan
Ms. Enid Garcia-Ortiz	Dr. Annette Lopez de Mendez	Dr. Alan Tipton
Dr. Rose Glee	Mr. Elijah K. Martin, Jr.	Ms. Jill Triplett
Dr. Barbara E. Hayes	Dr. Edwin A. Martinez	Dr. Harold Weinstock

***TOUR ASSIGNMENTS - Group 2***

Dr. Jaswant Bajwa	Ms. Yvonne E. Martin	Ms. Susan Steiner
Mr. Lawrence H. Barnes	Dr. James A. McLean	Dr. Samuel Sullivan
Dr. Furney E. Brown, Jr.	Mr. Joseph J. Monti	Ms. Karen Staab
Mr. George Carpenter	Ms. Gwen Marie Moolenaar	Ms. Beverly J. Warren
Mr. Lemile D. Chandler	Dr. Mildred Huff Ofsosu	Mr. Marvin Watkins
Mr. Clifford V. Johnson	Dr. Alden H. Reine	